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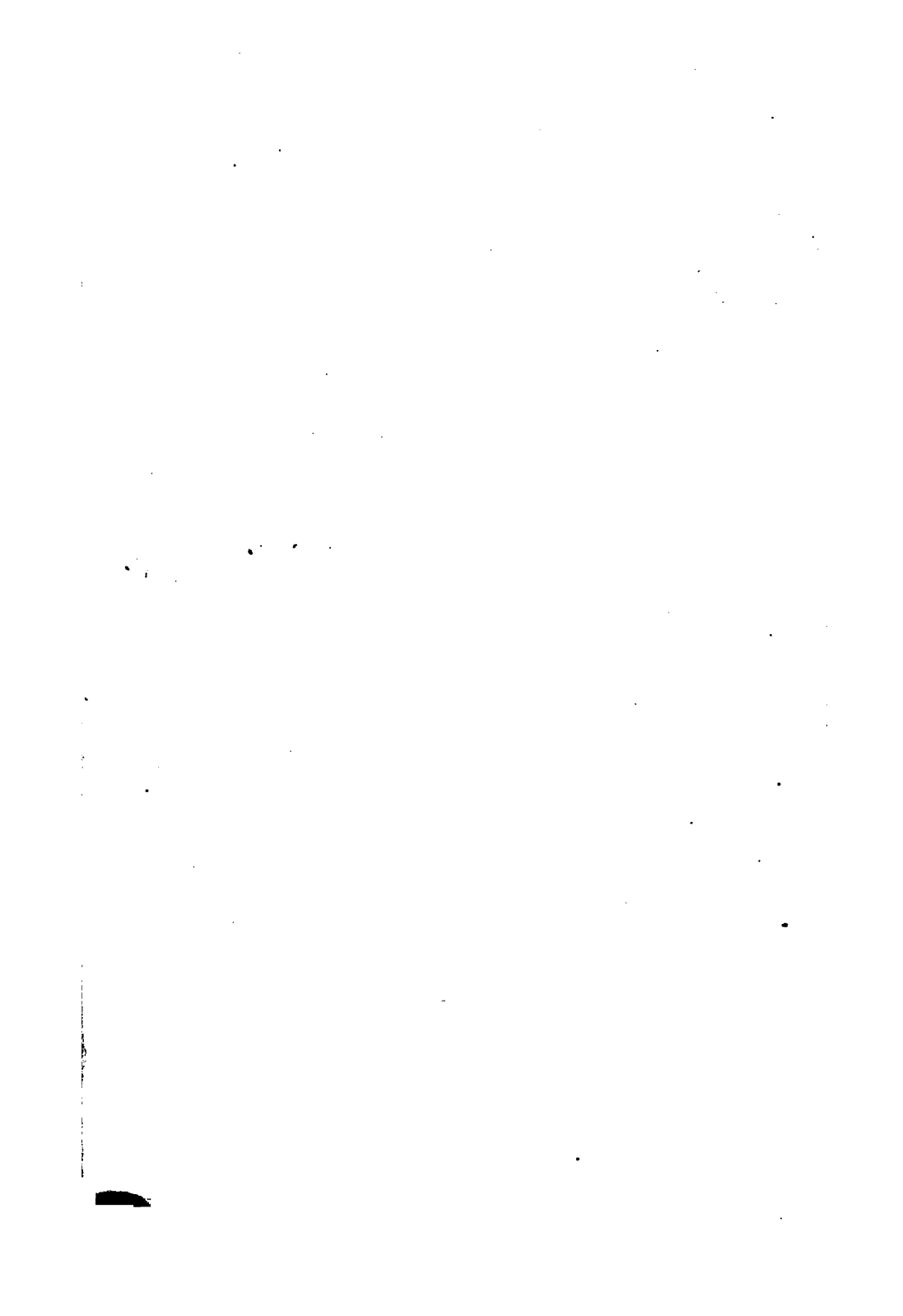
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EPITOME
OF
SKIN DISEASES,
WITH FORMULÆ,
FOR STUDENTS AND PRACTITIONERS.

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SECOND AMERICAN EDITION,
ENLARGED AND REVISED BY THE AUTHORS.



PHILADELPHIA:
HENRY C. LEA.
1879.

MP

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AMERICAN PUBLISHER'S NOTE.

IN printing this work from the MS. kindly furnished by the Authors, the press has been supervised by a competent professional gentleman, to secure the necessary accuracy of the text; and there has been introduced on page 50 the Classification of Dermal Diseases adopted by the AMERICAN DERMATOLOGICAL ASSOCIATION.

PHILADELPHIA, March, 1879.

PREFACE TO THE SECOND AMERICAN EDITION.

IN preparing this edition of our "EPITOME" for publication in the United States, we have increased the matter to about three times its original amount. The kindly appreciation manifested for the work by the American profession has stimulated us to spare no pains in rendering it more worthy of their approbation, and in its enlarged form we believe that it will be found of enhanced value. About two-thirds of the work is newly written, and we may direct attention particularly to the section regarding the Pathology of the Skin, which has been entirely recast, and now contains a concise account of all the important changes taking place in the dermal textures in disease. The clinical descriptions of diseases also have been amplified and occasionally remodelled. Lastly, we may say that in adding material to the book we have selected such as bears on the practical side of

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Dermatology, to the exclusion of that which is as yet hypothetical or merely of interest to the curious student.

The favorable reception accorded to the work on both sides of the Atlantic would seem to show that it has realized the object with which it was prepared—to afford assistance to the student in his early study of dermatology, and to serve as a manual for ready reference by the practitioner in his daily practice. For this latter purpose it has been specially adapted, by means of the references made in the sections on treatment to the formulæ at the end.

TILBURY FOX,
THOMAS COLCOTT FOX.

14 HARLEY STREET, LONDON, W.,
January 1, 1879.

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EPITOME OF SKIN DISEASES.

PART I.

THE GENERAL PRINCIPLES OF CUTANEOUS MEDICINE.

SECTION I.

THE MODE OF OBSERVING SKIN DISEASES.

IN order to pursue the clinical study, and to prosecute the treatment, of maladies of the skin with the best chances of success, attention should be primarily directed to one or two important considerations; relating, on the one hand, to the general character of cutaneous changes, and, on the other, to the mode of examining patients attacked by these diseases, as well as to some general facts concerning the complications and modifications of the disorders themselves.

First. *As to the General Character of Skin Diseases.*—Really, there is nothing special in the pathological changes occurring in the textures in these disorders. When the student approaches the study of cutaneous maladies, he is apt to imagine that he is about to encounter a new set of pathological phenomena, different from those with which he has been made acquainted in morbid alterations in other parts of the body, which in reality is not true. Recent researches in cutaneous pathology have cleared the way to a more correct knowledge of the changes taking place in the skin in disease, and, as a consequence, it is becoming more

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and more apparent that these morbid processes are identical with those occurring elsewhere in the body ; whilst a proposition to group skin diseases according to their pathological affinities, upon a plan like to that on which other maladies are classified, is now seriously entertained. It is a noteworthy and satisfactory circumstance that the student of to-day, who is compelled to acquire pathological knowledge over a wide field, is beginning to discover that his study of skin diseases is rendered comparatively easy, because of the complete similarity which has now been demonstrated to exist between the facts of general and of skin pathology. The reader does not find himself dealing with strange topics or data, but recognizes familiar appearances, changes, and causes in morbid action, when he turns from his study of the diseased states of other organs to deal especially with those of the integument in its several parts. It is all-important, then, to understand that there is nothing essentially peculiar in the principles of cutaneous pathology.

The misconception which has so long prevailed on this point, it is not difficult to account for. The student has been bewildered and often misled by the prominence given to the mere external form and aspect of eruptions, whilst the multitudinous names, too, which have from time to time been coined with great prolixity as designations for the infinite varieties of these external appearances, have been so unlike those applied to diseased states in other parts of the body, that they have materially supported the belief in an essential difference and peculiarity in the nature of cutaneous disorders.

Secondly. *As to the Mode of Examining Skin Diseases.*—In examining eruptions with the object of ascertaining their specific characters, error is frequently committed in attempting to decide upon these characters from a too partial or superficial examination of the phenomena they disclose to

the senses of the practitioner, and without due inquiry into their antecedents. Many persons are wont to content themselves with making a diagnosis at sight, judging from mere aspect alone. In many cases, without doubt, the nature of the disease under scrutiny can be correctly made out at once by an expert, simply from inspection, even when that is of a very partial kind, wherever the eruption assumes from the outset, and preserves throughout its course, its typical characters. But in other instances, on the contrary, it is difficult or impossible to make an accurate diagnosis without careful inspection of *many parts of the disease in several localities* in a given patient, and an inquiry into the previous history of its course. For many skin diseases have definite stages, and at the time of observation these may vary considerably in different parts of the body. The typical phenomena of a given eruption may be only in progress of development here, or be lost there, or modified by scratching in another locality. But an examination of the disease in several regions of the body will often disclose the existence of its earlier characters as well as the later changes, by means of which the general nature of the disease may be determined. Typical features may be discovered, in some cases, in a region of the body which, perhaps, comes last under inspection, when they have been absent in several other parts examined. But sometimes it is necessary to go carefully into the history of the case to discover the evidence of the existence of diagnostic features which formerly existed, though lost at the time of actual observation by the practitioner. Further, in reference to the necessity of a thorough examination of patients suffering from cutaneous troubles for the purpose of diagnosis, it is important to add that *parts*, or *stages* of different maladies often resemble one another, and may convey a very imperfect picture of a disorder. To avoid error then the diagnosis should be based upon a careful estimation of the phenomena or features presented by any given disease as a

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whole, and not upon the data afforded by any particular portion of the history, or distribution, of that disease.

The foregoing observations may be summed up in two cardinal principles, or to put the matter in another form, we may say, from what has been mentioned about the mode of examination of cases of skin disease, that there are two important rules which should be observed in attempting to make a proper diagnosis of a disease of the skin :—

The first rule is this :—

All diseased places, or as many as possible, should be carefully examined, and not one only, or one here and there: for the simple reason that the eruption may be at very different stages of development, and therefore present diverse aspects, in different localities upon the same patient.

The second rule is as follows :—

Where in any given case the earlier stages are not present so as to be recognizable, careful inquiry should be made by interrogation of the patient, as to the changes that have occurred before the disease came under observation, with the view of determining its nature.

The object of the examination prescribed by the first of these two rules is to trace out the origin and course of the disease, and to link together the various stages into a complete history which will correspond in its clinical features with an authoritative standard description of the disease, whatever it may be. During this examination special attention should be directed to *the character of the newest developments* of the eruption with the intention of determining the “initial or elementary lesion,” as it is called (to be presently referred to), or if there really be no new spots of eruption, the observer should carefully note the features presented by *the extending edges of patches*, which always constitute the most recently developed parts of the disease, and which, therefore, often portray the primary lesion. Complications are also more likely to be recognized by attention to this point.

The use of the second of the two rules has been cursorily referred to in a previous paragraph, but requires further discussion.

Very frequently no fresh developments of the eruption are taking place at the time of observation, and no extension of a given patch has occurred for some time. The malady has in fact become chronic and indolent, and moreover has lost its typical features oftentimes. The only way of making a diagnosis under these circumstances is by observing this second rule. For example, *eczema* is characterized mainly by a peculiar discharge, but the discharging stage, frequently, has passed before the case comes under medical observation, and the affection may present a dry and scaly appearance and be readily mistaken for *psoriasis*—a not infrequent error. Again, a disease essentially papular may have become inflamed and encrusted, and its true nature may therefore be overlooked, unless its history be carefully inquired into.

By the observance of these two rules the student ascertains what is the elementary lesion, as well as the characters of the several stages of different eruptions; and he should form with these materials a picture of the malady and so make an accurate diagnosis, just as the child with his dissected puzzle puts together the animal or landscape bit by bit to form the desired whole.

Thirdly. *As regards Complications.*—It should never be forgotten that two or more eruptions may occur together. When this is the case the different features of the concurring diseases will be mingled in varying proportion, and the observer will find himself dealing with characters and phenomena which, theoretically at least, he has learned are exhibited by different maladies. Examples of such commingling are to be found in the common coexistence in the same patient of *urticaria* and *scabies*, of *syphilitic rash* and *chloasma*, *lichen*

and *urticaria*, of *ecthyma* and *scabies*, of *purpura* and *urticaria*, of *eczema* and *scabies* or *furunculus*, and so on. The possibility of the coexistence of two diseases should never be lost sight of. Multiformity of eruption is, however, by no means sufficient evidence, although it is suggestive, of the coexistence of two or more distinct diseases, because certain uncomplicated diseases of the skin possess this feature. Practically it may be said, however, that there are only three diseases, which are essentially multiform in eruptive character. They are *scabies*, *eczema*, and *syphilis*. Supposing, therefore, that scabies, eczema, and syphilitic disease can be said to be absent, multiformity of eruption usually indicates the *coexistence of two or more distinct eruptions*.

Fourthly. *As regards Modifications of Eruptions.*—There are many influences which modify the aspect and the general character and behavior of skin diseases, which should be taken into account in dealing with their treatment. It is not only necessary that the physician should recognize any particular kind and form of skin eruption, but that he should appreciate the part played by a number of concomitant conditions in each individual, which modify the character and the duration of the particular disease present. There are various diatheses, special states of the blood, of nerve influence, and of tissue change, which specially tend to induce an unusual amount of inflammatory action, or favor undue cell activity or pus formation, or disorder of sensation, and the like, to which due consideration must be given. The evil influences of such conditions must be dealt with, so as to pave the way for the due action of curative measures directed against the disease more directly.

A few useful particulars or hints may not inappropriately be given here. Diseases of the skin are made to spread or take on an inflammatory character, and changes in the skin are exaggerated, by exposure to irritating agencies, such as

heat, cold, scratching, and by the contact of acrid substances of all kinds, as the handling of lime, sugar, and soda respectively, by bricklayers, grocers, and washerwomen. So, too, an inflammatory aspect is given to eruptions by acridities in the blood, as in gouty or rheumatic subjects, in dyspeptics; and in those in whom the bile acids, sugar, or retained effete matters are present in undue amount in the blood. Eruptions in strumous subjects are attended by an amount of pus formation which is unusual in non-strumous subjects. Undue chronicity is occasioned, oftentimes, by the existence of nervous or general debility: for nature then lacks the normal recuperative power which it always tries to exert in aid of the cure of disease.

The questions of age, sex, occupation, mode of life, and the general medical history of the patient have to be considered, and will be incidentally referred to in other places. Attention to the four indications already discussed will, however, be found of essential importance in the successful study, or in determining the treatment, of a skin disease. It may be observed, however, as regards age, that one essential difference between the cutaneous diseases of the young, as compared with those occurring in the middle-aged and old, consists in the fact that the former are often the result of imperfect digestion and assimilation, whereas the latter are induced by mal-influences connected with the habits and occupations and wear and tear of adult life, and degeneration of structure in the old, and are modified by a number of functional and organic diseases of internal organs, which are conspicuous by their absence in the young. The modifying influence exerted upon skin troubles by the strumous diathesis, however, is infinitely more common in the young.

SECTION II.

THE PATHOLOGY OF THE SKIN.

RECENT research in the field of dermatological pathology has advanced this branch of medical science to a reputable position; and dermatologists are beginning to describe with no little accuracy, and with an increasing general agreement amongst themselves, the minute tissue changes that go on in the various disorders of the skin, and to define with more approach to the truth the exact anatomical limits and locality within which these morbid processes begin and go on. It has been the custom, since, indeed, the days of Plenck and Willan, to divide diseases of the skin according to their general aspects or naked-eye features, such as lumpiness, and redness, or pimples, vesicles, etc, and it has hitherto been found convenient to make certain groups according to these various types of aspect, or "elementary lesions" as they are called. But some better method will assuredly be devised before very long, and probably it will have a pathological basis; for the old Willanian system, however useful, cannot be regarded—taking account, as it does, only of the mere outward aspect or appearance of eruptions—as anything but a tentative arrangement, roughly outlining the physical characters of cutaneous disorders. An accurate knowledge of elementary lesions, however, is still needed by all students of dermatology preliminary to the fuller study of the subject. We shall, therefore, first describe these primary lesions, and then proceed to make a few general remarks upon the nature of the changes that individually occur in the different component textures of the skin.

ELEMENTARY LESIONS.

These elementary lesions, as before indicated, are the types of external form and aspect presented by eruptions of the skin. These are nine in number, bearing the designations respectively of *maculæ*, or stains; *hyperæmia*, or redness; *pomphi*, or wheals; *papulæ*, or pimples; *vesiculæ*, or little bladders; *bullæ*, or blebs (*i. e.*, bladders larger than vesicles); *pustulæ*, or pustules, *squamæ*, or scales; and *tubercula*, or tubercles (little solid lumps). These several lesions we shall now briefly describe in detail.

Maculæ or Stains.—For all practical purposes these may be said to be of four kinds, viz., *pigmentary*, *chemical*, *parasitic*, and *hemorrhagic*.

I. **PIGMENTARY STAINS** are usually due to the presence in the *rete mucosum*, and more particularly in the lower strata of its cells, of altered coloring matter of the blood in the form of pigment granules, or minute dark particles. They may be divided into two groups, viz., *primary* and *secondary* maculæ. The primary or idiopathic pigmentary stains are few, and consist chiefly of such things as freckles and the discolorations left after hyperæmia induced by local irritants of various kinds. The majority of pigmentary maculæ belong to the group of secondary stainings, that is to say, they do not constitute the sole, or primary, or main condition present, but follow in the course of other morbid states of importance. They, for instance, occur in and are secondary to syphilitic eruption, and in association, in like manner, with certain cachexia, such as Addison's disease and leprosy. They are left behind by such eruptions as *lichen planus*, and the *vitiligo* of Willan (*xanthelasma* of ourselves). They are sometimes strictly *physiological* in character, as seen in the bronzing of the forehead, and other parts of the surface, in connection with pregnancy and uterine activity of

other forms. Maculæ of this kind are not raised, they are unaffected by pressure, and are not the seat of any morbid sensation. There may be an entire absence of pigment, when the skin, of course, looks *white*.

II. CHEMICAL STAINS are seen in the instances of discolorations from iodine, silver compounds, bile products, and the like.

III. PARASITIC MACULÆ are usually of a fawn color, and are caused by the presence of fungous elements growing between the cuticular cells, as seen in *tinea versicolor*.

IV. HEMORRHAGIC STAINS are due to the actual extravasation of blood, or the escape of its coloring matter alone, into the skin textures, and the varying hue is accounted for by the changes which have taken place in the transuded material, as typically portrayed in an ordinary bruise. *Purpura* is the chief disease in which extravasation of blood into the skin occurs, but an hemorrhagic aspect is assumed by *variola*, by *herpes*, by *lichen planus*, the bites of insects, and the *petechiæ* of febrile states.

Hyperæmia or Redness may be active (arterial) or passive (venous). Active hyperæmia consists of redness removable by pressure. It may be punctiform, patchy, or consist of circles. It mostly is accompanied by swelling from effusion of serosity, and the escape of leucocytes; by disordered sensation (pruritus and burning); by a slight rise in temperature; and it is followed by desquamation. It is caused by local irritants, by changes in the blood, and by excitation of the nerves. It may occasionally exist alone as the sole disease, as in the erythemas; or, as is usually the case, it may be a stage or part in the development of more complicated changes, as in the inflammatory disorders of the skin. All active morbid alteration in the skin is attended by hyperæmia, more or less pronounced. Passive congestion of the skin may be said to be the result of some cause

retarding the flow of the blood through the veins towards the heart, or, in fact, to be of mechanical origin.

Pomphi, or **Wheals**, are raised hyperæmic swellings, which vary much in size and shape. They have a palish centre, and a red areola in varying proportions. They very rapidly form, to as rapidly disappear. Attended by a certain feeling of heat in the part together with tingling or itching, they are typically portrayed in the sting of the common nettle, with which every one is familiar. The *fugitive and capricious character* of the wheal is the most characteristic feature in its behavior. The wheal is significant of *urticaria*. The wheal may be oval, or round, or linear, or band-like in form; the latter generally are the result of scratching in a particular direction, and when so produced are said to be *factitious*. In children they are often quite small, resembling bug-bites, and are followed by the deposit of lymph in the form of minute, solid, pale papules, which may run on into slight vesicles, as the "lichen urticatus" of children, which is a phase of urticaria. Wheals are caused by sudden irritation with immediate contraction of the capillaries, but this contraction is speedily followed by free dilatation and escape of serosity into the tissues, which accounts for the redness and the swelling; but the vessels beyond the area of dilatation, that is, away from the *immediate* seat of the irritation inducing the wheal, are probably in a state of spasm; as soon as this gives way the wheal begins to disappear, and as this happens speedily, the wheal is essentially fugitive. During the formation of the wheal the serosity finds its way to the *rete* cells, and more particularly the lax tissue of the papules outside the vessels. It exerts, as it augments in amount, some pressure by its distending influence, and as the greatest effect is felt about the centre or apex of the wheal, the paleness at the corresponding point on its surface, which is in strong contrast

with that of the bulk of the wheal, is most likely due to the emptying of the capillaries at this point by this pressure, and the masking of them by this fluid. This is proved by the gradual reappearance of the pink blush over the centre of the wheal as the effusion and swelling lessen, the white aspect going and the red reappearing *pari passu* with the absorption of the fluid and the diminution in the tension of the tissues. Some think that the pale centre is due to spasm of the vessels, but facts are clearly against this view. In exceptional cases the effusion is so decided and rapid that the serosity uplifts the cuticle, and produces a vesicle or bulla; but this is not a common occurrence. In other rare instances the effusion of serosity is very great and deep, so that large tuberoso swellings are induced. These are more or less fugitive in character, and are attended by heat and itching, but naturally where much fluid is transuded, it takes longer to become absorbed.

Wheals cannot be said to be inflammatory in character, because no new products are produced in connection with their formation. They are rather developed as a consequence of an alteration of the calibre of the vessels, induced by disordered nervous influence. It is a vaso-motor, and not a local, tissue disorder.

Papulæ or Pimples.—These are *small*, circumscribed, more or less firm elevations of the surface. The word pimple sufficiently expresses their general character. Papules are of several kinds, however, and are produced by a variety of causes; for instance, they may result from the presence of effused serosity in small amount, or lymph, or a new growth in the derma itself; or by swelling, thickening, or plugging the follicles. They vary in size somewhat, and in color, according to the amount of congestion by which they are attended. If very vascular they are small, red, and soft; if due to the presence of solid material in the textures,

they are paler, and, of course, firmer. It is important to distinguish *true* from what may be termed *false* papules. True papules are such as assume and retain the aspect of papules from the beginning to the end of their career. In other cases what seems to be a papule—but which is false, as it were, to its character at the time of observation—may be in reality an early stage in the formation of a vesicle or pustule. That is to say, when in the development of a vesicle there is but slight effusion, the dermic structures are raised into papules; but this is succeeded, as the fluid increases in amount and the inflammation progresses, by uplifting of the cuticle, the formation of pus, and other changes. It is manifestly wrong to designate the papular stage of a vesicle as a true papule. It is a potential vesicle, as seen in *eczema*, *hydroa*, etc. It is of no little moment to remark the distinction here pointed out in diagnosing cutaneous eruptions. Patches may be and often are formed by the aggregation of pimples. Papules are often attended by itching.

True papules may, clinically, be conveniently regarded as of six chief kinds:—

- a. They may be due to hyperæmia of the papillæ, forming bright red points, as in *strophulus*, or the papules of certain of the acute specific diseases.
- b. They may consist of turgescient and erected follicles, the hair, the sweat, or the sebaceous, as in cases of follicular hyperæmia, induced by scratching, and in slight *acne* and the early stage of *miliaria* respectively.
- c. They may be caused by the deposit of lymph, or by cell infiltration about the walls of the follicles, as in *lichen planus*.
- d. They may be actual lymph formations, or cell growths in the derma proper, as in *lichen*, *prurigo*, and *sypilis*.

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- e. They are caused by collections of sebum or epithelium, or both, in the follicular orifices, as in *pityriasis pilaris*, in which the hair follicles are plugged by epithelial exuviae, or in the *acné sébacée cornée*, in which the sebaceous glands are plugged, rasplike, by sebum.
- f. Papules are sometimes the result of mere hypertrophy of normal tissue, as in papillary warts.

It will be noted that papules may be situated on three chief sites, viz.: the corium, the hair follicles, or at the sweat ducts, as in *miliaria*.

Vesicles.—These have hitherto been described as little bladders, varying in size from a pin-head to small split peas, and caused by uplifting of the cuticle by serous fluid poured out by the vessels of the papillæ; and, further, as either single or loculated in structure. But this definition, and especially the former portion, must now be regarded as affording an altogether too limited representation of pathological facts.

The part of the skin tissue distended into vesicles, and the nature of the fluid which causes the distension, vary essentially in different cases, but it may be stated that there are three principal kinds of vesicles:—

- a. Serous or inflammatory vesicles.
- b. Sweat vesicles, or vesicles formed in connection with the sweat ducts; and—
- c. Lymphatic vesicles.

a. *Serous or inflammatory vesicles* are the commonest, by far. They rise above the level of the surrounding skin, and tend to burst and discharge their contents and dry away. Some vesicles burst with difficulty, as in *herpes*, in fact, these often never rupture. Sometimes their contents become opalescent or opaque, which is due to the admixture of pus with the serosity, thus giving rise to vesico-pustules, which

form yellowish crusts, when their contents dry up. These vesicles may be acuminate as in *scabies*, but usually they are more or less globular, as in *eczema*, or *hydroa*. They may be oval, and perhaps at one period of their course umbilicated, as in *varicella*. Sometimes they are isolated, as in *scabies* and *hydroa*; at other times aggregated together into patches, as in *eczema*, or grouped in circular form as in *herpes*. They are usually attended by burning or itching. Such are their gross characters. In regard to their mode of formation and anatomical structure, it may be said that inflammatory vesicles answer to the ordinary description of vesicles, that is to say, they are due to the escape of serosity from the papillary and subpapillary vessels, which finds its way to the surface and uplifts the tissue which bars its exit. This may in its escape not disturb the *rete* tissue much, but find its way chiefly between the horny and mucous layers, raising the former up into vesiculation, as in *pemphigus*, and mild cases of *eczema*, probably, in which this condition is associated with *œdema* and cell infiltration of the derma; or in its passage through the *rete* the fluid may cause more or less stretching of these cells into fibres, which then form the walls of little loculi in which the fluid is contained, and in which, when the disease is inflammatory, cell-products make their appearance by migration from the corium vessels, as is the case in *variola*, *herpes*, *pustular eczema*, etc. The inflammatory vesicle, therefore, may be single, as in *pemphigus*, or, as in most of the cases, compound, as in the common vesicular affections.

b. Sweat vesicles. In these the vesicles may be elevated and globular, as in *sudamina*, or imbedded in and below the level of the skin, as in the earlier stages of *dysidrosis*. The fluid present may be normal sweat, and collected between the layers of the epidermis, as in *sudamina*; or the fluid may be sweat mixed with serosity poured out from the vessels of the sweat tubes; in this case the fluid first distends the portion

of the sweat duct in the *rete*, which is the commencement of a globular dilatation that by its increase projects upon the surface, and may by continued development, collection of fluid, and junction with other cysts, produce *bullæ*. Usually the duct bursts, and the walls of the large vesicle are formed in part by the stretched *rete* tissue, as in *dysidrosis*.

c. *Lymphatic* vesicles, that is to say, vesicles having the aspect of clean, transparent, little bladders, and not merely minute, soft, little reducible swellings, are observed in lymphangiomata and elephantoid diseases, and are distensions of the lymphatic spaces of the papillæ and base of the papillæ. They are usually attended with hypertrophy of the fibro-cellular texture of the skin, and in fact may form part of and stud over a hypertrophic mass. The walls of these vesicles are formed not by the *rete*, not immediately at any rate, but by a layer of the tissue of the papillæ, though the *rete* is just outside it, and is often thinned by pressure. The lymph vesicles are lined by endothelium.

There is another aspect in which the features of vesicles may be summarized, and that is from the points of view of their single or compound nature. This arrangement affords a good general indication of the characters of different vesicles, and is as follows :—

A. SINGLE-CHAMBERED VESICLES are produced by—

- a. *Sweat* between the horny layers of the epidermis, as in *sudamina* ;
- b. By *serum* between the horny and mucous layers, as in *pemphigus* and mild cases of *eczema* ;
- c. A *mixture of sweat and serous fluid* in a globe formed by distension of the sweat tubes and *rete* tissue immediately adjoining, as in *dysidrosis* ;
- d. By *lymph* distending the lymphatic tissue and its spaces in the papillary and subpapillary regions, as in *lymphangiomata*.

B. COMPOUND OR LOCULATED VESICLES are produced by the presence of inflammatory fluid and cells, which uplift the cuticle and collect in loculi formed by the stretched out *rete* cells and the distended meshes of perhaps the upper corium layers, as in *variola*, *herpes*, *severe eczema*, and *hydroa*, or in a blister.

PUSTULES. A typical pustule, as generally understood, is a small circumscribed elevation of the skin textures produced by the presence of pus; but there are two other forms, which must not be lost sight of, viz. the one produced by inflammation of the sebaceous glands, as in *acne*, and the other due to suppuration set up in a papule, as in syphilis. The vesicle and the pustule differ in the relative amount of leucocytes in each. Ordinary pustules vary in size from that of a pin's head to a sixpence or shilling, and their yellow color is due to the pus; if dark, to the presence of blood coloring matter or actual blood. They are attended with more inflammation than vesicles, and by a deeper affection of the tissues, and therefore have harder bases. They tend to dry up rapidly into dirty-looking crusts, and sometimes leave scars behind.

True pustules are formed in the same way as vesicles, and the pus is contained in loculi, or meshes of the *rete*, similar in structure to those of compound vesicles already described. The vesico-pustule has already been referred to in speaking of vesicles. The term is applied to the condition in which the aspect of a vesicle is first assumed, but in which pus is *subsequently* produced in distinct amount, so that the aspect of the pustule is more or less closely approached. The pus is not so freely nor so promptly produced as in the pustule.

Bullæ are really large vesicles or blisters. They are *primary* and *secondary*. The primary, or true bullæ (because essential parts of the disease), occur in *pemphigus*, *hydroa*, *pyæmic pemphigus*, *erysipelas*, *syphilis*, and *leprosy*;

and they are developed by friction in some people. The secondary, or accidental bullæ, occur in *dysidrosis*, *eczema*, and *urticaria*.

Primary bullæ vary in size up to that of a large egg; and bullæ of different magnitudes may occur together in the same patient. They are seen not only in numbers over the body, but occasionally they also develop singly. They vary in hue according to their age and contents. At first they are translucent, and subsequently become opaque or even hemorrhagic in aspect from the admixture of blood or its coloring matter with their contents, which generally contain albumen, with few corpuscular elements, the reaction being alkaline. Ordinary bullæ are at first tense, then become flaccid; the walls, however, are firm, and do not readily burst, so that, as the rule, bullæ gradually shrivel away, leaving a red mark and some crusting, except in cases associated with constitutional cachexia, when there may be more or less ulceration. From first to last bullæ do not possess any decided areola; exceptionally when they crowd together very closely, as in *pemphigus foliaceus*, the secretion of the bullæ and a certain amount of discharge from the skin dry together into considerable crusts or flakes. Mostly they are unattended by any decided subjective sensations, but, occasionally, attendant burning and smarting, as in *pemphigus foliaceus*, and intolerable itching, as in *pemphigus pruriginosus*, are present.

The *secondary* bullæ of *eczema* are accounted for by the non-rupture of several vesicles which join together. They are seen especially about the hands. In *urticaria* occasionally small bullæ are observed owing to very free and excessive outpouring of serosity. In *dysidrosis* bullæ occur; but whereas in other cases they are single chambered, in *dysidrosis*, in their early stage, they are loculated or rather compound, being produced by the aggregation of a series of distended sweat follicles and adjoining *rete* tissue, projected upward bodily, as it were; the walls of the separate little

vesiculations forming so many partitions which may give way later on by the increasing distension of the parts by fluid, whereby the loculated is reduced to a single-chambered bulla; the ruptured partitions, however, remaining more or less loose in the cavity. Ordinarily, in other diseases, the bullæ are formed of a single chamber only, from first to last, except, perhaps, in early blister, but in this case the partitions are soon ruptured.

Squamæ or Scales are formed of dried flakes or thin layers of detached epidermic scales. They differ from crusts in the fact that they are not formed by the drying up of discharge. Scaliness occurs as a secondary consequence in all inflammatory skin diseases; but squamæ also form as an essential part of squamous inflammation—*e. g.*, *psoriasis*, and *pityriasis rubra*; they occur also in hypertrophic conditions. They may be thin and fine, as in *pityriasis simplex*, or large and flaky, as in *pityriasis rubra*, in which disease they are often arranged like the tiles of a house, and are produced and thrown off in great abundance and rapidity. They are thin and greasy in *seborrhæa*, and dark and horny in *ichthyosis*.

Tubercula or Tubercles.—A *tuberculum* is a solid fleshy lump in the skin formed by the growth of new tissue. It is a term applied to any smallish lump which is not large enough to deserve the name "tumor," to which, on the other hand, the term papule is not applicable. A tubercle is, however, a big papule, and there is no real line of demarcation between the two, for oftentimes a papule grows to a tubercle, as is seen in syphilis, or *lupus*. Tubercles occur under two main conditions—where there is a hyperplastic growth of connective tissue, as in *fibroma* and *keloid*, when they are said to be *homologous*; or there is a formation of a new or foreign kind of tissue, as in *cancer*, *lupus*, *syphilis*,

rodent ulcer, leprosy, frambæsia, etc., when the growth is termed *heterologous*. The tubercles in these diseases are, in their early stage, round, firm to the touch, and either possess the aspect of normal tissue, as in *fibroma*, or are reddish and more or less vascular, as in the other diseases before mentioned. They undergo a variety of changes, such as enlargement, aggregation, absorption, softening, or ulceration; but they may remain unchanged for years. When they degenerate they lead, after ulceration, to more or less scarring. Dr. Dühring makes a separate class of the large and more pendulous outgrowths from the skin, and terms it "tumores." It comprises "alterations in the sebaceous glands; new formations in the corium, connective tissue, bloodvessels, and lymphatics." It is a useful clinical arrangement.

SECONDARY CHANGES.

Crusting.—This is a common condition. The crusts are derived mainly from three sources:—

- a. By the drying up of *discharge*—seroso-purulent fluid, or actual pus or blood. These fluids may be poured out free upon the surface from inflamed or ulcerated surfaces, as in *eczema* and syphilis, or derived from the contents of bullæ, as in *rupia*.
- b. Crusts may also be formed by dried sebum, as in *seborrhæa*.
- c. From the collection together of the elements of parasitic fungi, as in *favus*.

Crusts formed by the escape of serum are thin and light-colored, often ill-defined; from pus, thick, yellow and with definite borders; from the drying up of bullæ, thin and darkish; from the drying of sanious pus from ulcers, thick, dark-colored, adherent and heaped up; from collections of dried sebum, flat, easily detached and greasy; and from favous elements, sulphur colored, pulverulent and honey-combed.

Ulceration.—This, like crusting, may be said to arise from three sets of causes :—

- a.* The most common kind is the result of cachectic inflammation, such as the strumous and syphilitic ;
- b.* It may be due to the presence and softening of new growths which replace and destroy the normal textures, and which themselves decay in due course, as in *lupus* and *cancer* ; or
- c.* It may result from the softening and decay of actual outgrowths from the skin, as in *fibroma* and *yaws*.

Ulcers vary in size, shape, and depth. Strumous ulcers are indolent, unhealthy in aspect, with boggy edges and an offensive, dirty discharge, mixed with attempts at crusting. Syphilitic ulcers have sharp-cut, serrated, everted, but not undermined edges. Cancerous ulcers have everted and undermined edges. They leave behind decided scars. It must not be forgotten that superficial ulceration may follow common inflammation in ill-nourished people, especially in œdematous, congested, and dependent parts, such as the legs.

Excoriations.—In these the true skin is more or less exposed, but it is not otherwise disturbed, and excoriations are due to scratching or rubbing of itching parts by the patient, or to maceration of any part by fluid, perhaps its own secretion, as in *intertrigo*. Excoriations are observed in a number of cases of disease of the skin which are attended by itching, for the relief of which scratching is practised, but chiefly in *eczema*, *lichen*, *prurigo*, *hydroa*, *psoriasis*, *scabies*, *phthiriasis*, and in cases also of *pruritus* of the surface without eruption. Excoriations, therefore, can be truly the sole visible condition present, or it may be a superaddition to other eruptions, a difference of some importance ; for if there be only the signs of an excoriated skin present, the cause of the pruritus must be sought for in some blood state or nerve disorder, and not in the skin itself. Excoriations are often

seated around the hair follicles alone; about an eczematous spot; or in a given patch, as in *psoriasis*. In *scabies* they are found particularly on the front of the arm, the abdomen, and thighs; in *phthiriasis* about the neck and shoulders, and in the form of linear scratchings.

Fissures are linear cracks which occur in parts that are rendered dry, hardened, and brittle by infiltration with lymph, or about the hands in *eczema* and *psoriasis*.

Scars are left by traumatic injuries, caustics, and by certain diseases which ulcerate, such as *variola*, *furunculus*, *anthrax*, *pustula maligna*, and strumous and syphilitic disease. Scars need scarcely be described as regards their general appearance. They signify that the true skin has been removed or destroyed, and replaced by "cicatricial tissue."

GENERAL OBSERVATIONS ON THE PATHOLOGY OF THE SKIN.

In describing the "elementary lesions," the intention was to convey information regarding the types of form and the external aspects which skin diseases assume; it may now be useful to add some few remarks upon the general nature and main anatomical seats of the changes that occur in these maladies :—

The Cuticle.

A. *The horny layer*.—The changes in this structure may be said to be almost invariably secondary to changes in the *rete* and deeper tissues below. There are none of moment that are of primary origin if we except the results of traumatic or toxic injuries, undue maceration of fluid, and the invasion by *fungi*. This will appear reasonable enough if it be remembered that the cells of the horny layer are merely the *rete* cells pushed upward from below, and which have undergone desiccation.

The *secondary* changes are many and various. The cells are *increased in amount* whenever the *rete* is in a state of excitation from pressure and friction, as in corns, warts, or as in congestive conditions, especially in *psoriasis*, where the whole *rete* is eminently hyperplastic; also in inflammatory diseases, as *eczema* and *pityriasis rubra*, where a hyperproduction of scales marks the latter stages of the disease. A like condition may be part of a general hyperplasia of the tissues of the skin as a whole as in *elephantiasis arabum*, and is congenitally so in *ichthyosis*. The cells may be disposed more or less normally, there being only such an excess as to cause roughness, or their normal stratification may be altogether destroyed by their rapid production and heaping together, as in *psoriasis*. The horny layer is elevated *in connection with portions of the rete cells* by fluid issuing from beneath, and in some like fashion in the formation of vesicles as in *eczema*, or *herpes*, or it alone may form the walls of vesicles or bullæ as in *pemphigus*, or the cells may be only swollen, œdematous, and closely packed together with fluid amid them as in *œdema*. The cells may be collected together upon the skin and shed not only now and then *en masse*, as in *psoriasis*, but they may be also shed, again and again, in rapid and successive crops, as in *pityriasis*. Sometimes they are shed once and for all, as in *erythema*.

The cells of the horny layer again may be *diminished* in absolute amount, as in those cases where the nutrition of the *rete* is interfered with by such influences as pressure from below and substitution of the normal textures by new growths, as in *syphilis* and *lupus*. In these cases the cells are disposed in irregular scales upon the surface, the flakes of which are often few and fine, but it is important to add that the appearance of scaliness is apt to convey at first sight the idea of an excessive formation of cuticle, whereas the amount of epidermis is less than normal in its total. The condition here is a *minus* ill-stratified, and not a *plus* ill-stratified one, as it is in *psoriasis*.

Again the cells may be altered in character more or less, retaining the characters of *rete* cells, from failure to undergo the horny transformations, in which case such failure may be due to a too rapid and imperfect formation of cells.

Lastly, vacuolation may, now and then, go on in the cells of the horny layer.

B. *The rete Malpighii*.—The changes which occur in this layer are very important ; they are *primary* and *secondary*, and, as before stated, are associated, in most instances, with others in the upper layer of the epidermis. Unquestionably, morbid processes *originate* in the *rete*, and are primary. The simplest instances of such primary alterations are seen in the hypertrophy of warts, corns, callosities, and notably, in our belief, in *psoriasis*, in which diseased state the two layers of epidermis are concerned. We have long taught, and our convictions on this point are based in part upon careful microscopical observations, that psoriasis is to be regarded as due to an hyper-activity of the *rete* cells, which increase so freely as to be extended down beside the papillæ into the corium tissue, and also spread in undue proportion upwards. The nuclei of the cells are active, they freely multiply, and rapid cell division takes place, vacuolation being marked in many cells ; the vessel changes being probably secondary. Another instance of the origination of disease in the *rete* occurs, we believe, in *epithelioma*, large processes of morbid *rete* tissue being projected downwards, portions finding their way along the lax connective tissue and following, probably, the lymphatic tracts toward the glands, and developing into onion-like bodies *en route* ; the phenomena of congestion and inflammation being concurrent. A *congenital* hyperplasia of the epidermis associated with papillary hypertrophy is illustrated by *ichthyosis*.

Pigmentary deposit in the lower strata of the *rete* cells may be a primary change, but it is, as the rule, secondary to

other morbid conditions, especially such as are associated with cachexia.

The alterations in the rete tissue which occur in congestive and inflammatory diseases are very common and distinct, but it must be understood that the rete does not actively participate in these changes, but rather is altered as a consequence of the escape of fluid and migration of cells into it from the vessels beneath. Therefore the changes are, strictly speaking, *secondary* to the vascular disorder. As a consequence of the escape of fluid into the rete tissue, the cells swell and become loosened, separated, or put upon the stretch, as the fluid increases in amount, and travels to the surface. As has been explained in speaking of vesicles, loculi are often formed by the separate and stretched out rete cells. If these loculi open to the surface, the rete layer is more or less exposed, and may continue to give exit to a "discharge." The migration of leucocytes from the vessels of the papillæ and their subsequent change account for the presence of pus in the rete meshes. If the inflammation be severe and continuous, the nutrition of the rete may be so interfered with that it is more or less destroyed. Such changes as the above described as are induced by the presence of fluid occur in eczema, herpes, hydroa, blister, dysidrosis in part, pemphigus, and such alterations as are dependent upon the migration of cells into the rete are observed in eczema, herpes, impetigo, variola, etc.

It will be noticed that the *primary* seat of change is the vascular tract below, and that the cell migration and final transit may concur, as in eczema, or it may be mainly fluid escaping, as in pemphigus, whilst the cell activity is comparatively insignificant or nil. Another principal alteration in the rete is the invasion, destruction, or replacement of its tissue by new or foreign tissue. In this case the production of rete cells is gradually interfered with, and the normal tissue becomes atrophied. Such change is seen in syphilis,

lupus, and rodent ulcer. The rete, however, is not alone nor primarily affected; the corium, in its superficial or deep layer, being the seat of the mischief in the first instance. The rete may be reduced to a thin layer, or be completely gone in parts, or small areas may remain isolated as it were by the new cell-growth around, the whole being finally replaced by cicatricial tissue where ulceration has occurred.

Somewhat similar results are produced by pressure upon the rete below by molluscum tumors, cysts, lymphangiomatous vesiculations, which form in the papillary layer, etc.

Vacuolation of the cells in *psoriasis*, and some other conditions, has already been referred to.

The Corium.—The changes in the fibro-cellular structure of the corium are also *primary* and *secondary*. The primary consist mainly in an increase—a *plus* state—of the connective tissue elements, and, as an independent condition, is seen in morphœa, keloid, fibroma. The relative amount of cells and fibres varies. In the one case the tissue is *lax*, and contains many cells as in fibroma; in other instances the fibres predominate, forming a dense, tough mass of tissue, as in keloid. It is an open question whether the cells of certain new growths that invade the corium primarily, such as lupus, syphilis, elephantiasis, are derived from the cell-elements of the connective tissue of the corium, or from the blood-current, but probably the latter.

In any case “neoplasmata” lead to destruction and atrophy of the corium tissue. In xanthoma the connective tissue undergoes a fatty change.

The *secondary* changes in the corium have reference to prior changes in the vessels. The corium tissue is rapidly rarefied about the vessels by the escape of fluid from them, as in œdema, and this is specially so in the papillary layer. It is always more or less hypertrophied, as the result of vascular excitement of any decided duration. It is infiltrated

with lymph, serosity, or cell-growths, first about and then beyond the vessels in inflammatory disease, and may suffer more or less injury or atrophy in consequence, especially in its papillary layer. The cells which escape from the vessels (leucocytes or wandering cells) into the corium are no doubt the source of a number of new growths, according to the influence exerted upon them by general and local conditions. In intense and long-continued inflammatory infiltration, the deeper layers are involved, and the occurrence of induration, fatty, and atrophic changes—some or all of these are said to occur. The effect of neoplasms in inducing similar destructive changes has been already noticed.

The papillæ are enlarged to some extent in *psoriasis*, but, as Dr. Robinson points out, such an appearance is often deceptive, owing to the growth downwards of the interpapillary portions of the rete.

The portion of the connective tissue adjoining the sebaceous glands becomes specially involved in inflammatory and other changes in those glands, as in *acne* or *sycois*, and especially in strumous subjects.

The papillæ too are enlarged and elongated where the lymphatic tissue and spaces augment and increase in size, as in *elephantiasis arabum*, but this is a secondary change, perhaps. Where lymphatic or blood cysts form either in the papillary or subpapillary localities, the tissue around may be pushed aside and thinned by pressure.

The corium is also the seat of certain animal parasites, such as the Guinea worm, or parent filaria, and abscesses follow their presence.

The Vessels.—The bloodvessels are primarily concerned and hyperplastic in *teleangiomata*, or vessel tumors, and nævoid growths. Also in most congestive and inflammatory affections, except, of course, where the inflammation

is *secondarily* induced by the irritation of morbid textural alterations. In inflammatory disorders, the vessels are enlarged or dilated, and frequently augmented in amount, the veins being especially numerous, and the capillaries of the papillæ particularly prominent and active. The results of "vessel activity," viz., effusion into the tissues, and disturbance by the presence and results of cell infiltration in the rete and papillary layers, have been dealt with generally in the description of vesicles and pustules. It is necessary here to point out that the degree and extent of the arterial and venous excitement depend upon the nature of the exciting cause. It may be very temporary, as in *urticaria*, where there is spasm of the vessels of short duration. It is more prolonged, but still *comparatively* of short duration in other erythemata, due to the operation of temporary causes, such as chill, or excessive heat, or "rheumatic" disturbance. It is prolonged and developed with all its more serious consequences, when excited by blood disorders, or chronic nervous causes, or diathetic conditions.

In some cases the vessels of the more superficial strata of the corium, and especially the papules, are mainly or solely affected, as in *psoriasis*, *lichen*, and *prurigo*; in others those of the longitudinal plexus are chiefly involved, as in *pityriasis rubra*. In other instances the vessels generally are implicated, as in severe *eczema*.

It is important to distinguish between vessel excitement leading to secondary changes in the textures, as in the inflammations, and that which occurs as the result of tissue activity itself, as in *psoriasis* and *cancer*.

No doubt the vaso-motor system of nerves plays a great part in determining the occurrence of various congestive states of the skin, as in *lichen rubra* and *pityriasis rubra*, but no facts are at present forthcoming to enable the pathologist to offer any satisfactory conclusions upon the subject.

The Lymphatic System plays an important part in many skin diseases in our estimation. The lymphatic vessels may be primarily or secondarily affected. Primarily they may be enlarged and increased in number and size, both as regards the juice tracts and the actual vessels, where the tissues are generally hyperplastic, as in *lymphangiomata*. We have referred to this in speaking of vesicles, but the changes are mostly *secondary* to other conditions. The lymphatic tissue seems to be more or less in a state of activity whenever the corium tissue is specially involved in disease, according to our own observations, as, for example, when the connective tissue is hyperplastic, or involved in inflammation, or when it is the seat of new growths. In some of these cases the lymphatics are in a condition of exaggeration, and more or less dilatation in parts. It seems that the office of the lymphatics is to regulate the amount of nutrient material retained in the connective tissues, and where great change is occurring, or the supply of fluid and cell from the blood current is excessive, the lymphatics are in a very active condition, in order to be able, as it were, to successfully remove the overplus. This is observed in *elephantiasis arabum*, *lymph scrotum*, and other diseases where indeed new lymphatics even may form in the enlarged papillæ. It is probable that it is along the lymphatic juice tracts that many diseases spread from the more superficial to the deeper parts, as in *epithelioma*, *farcy*, *erysipelas*, etc.

Nerves.—Of the organic changes that occur in nerves we know far too little. We know that in *herpes zoster*, *leprosy*, *syphilis*, *nævus*, and *teleangiectasis*, and some other diseases, they have been found diseased, but the field of inquiry in this direction remains comparatively unexplored, although it is a rich one.

The Glands.—These are subjected to a variety of changes, both primary and secondary. But it is important

to observe that whilst these organs are disturbed secondarily in several general affections of the body, or in common with like diseased conditions of the adjoining textures, many of the disorders to which they are liable are, on the other hand, not only confined to them, but are of a special and different nature from those observed in other parts of the body. This is accounted for by the existence of a special structure in these glands devoted to the special functions they perform. A new set of conditions therefore is observed in glandular disorders. So long, of course, as the fibro-cellular texture of the walls, or even the epithelial linings of the glands, or their periacinous lymphatic tissue and spaces, and their vessels, are the seat of disease, in connection with or independently of the affection of other structures in the skin, as in congestion, *syphilis*, *lupus*, and *cancer*, for example, a similarity in pathological appearances is observed, but when the true gland structure or any of its functions is involved this ceases. But even if in the former case the histological appearances are alike clinically, there are differences observable to the naked eye in the case of the sebaceous glands, because these glands are mostly irritated by the morbid action about them, and pour out an excess of secretion which crusts on the surface, and forms like plugs on its extracting duct, the special amplification of, or localization of the disease to, the sebaceous glands being evidenced by this feature, as in *lupus erythematodes*; disseminated follicular *lupus*; *syphilitic acne*. The sweat-glands, being more deeply seated, escape more usually.

Examples of secondary disease are syphilitic and strumous acne, or cortical sudamina, or miliaria, or atrophy of the glands from the pressure of new growths and ulcerations. Examples of concurrent disease in the sebaceous glands are their enlargement in elephantiasis, and leprosy, and other diseases, attended with general textural hypertrophy of the

textures, the infiltration of the gland with lupoid cell-growth, or cancer-elements, with a like state in the corium generally.

The *primary* diseases are numerous. They have reference to augmented, or diminished, or depraved secretion of sebum or sweat, as the case may be, by which the skin is rendered dryer or moister, or more oily and greasy. The secretion may collect in the ducts or in the actual glands, and irritate and inflame, inducing acne or dysidrosis, or distend the structure into cysts. Congestive and inflammatory disorders may arise too from a variety of causes, even the use of particular drugs, as in bromide and iodide acne. In undue activity of the fatty gland, as in molluscum, vacuolation and cell-division are admirably seen. In gland diseases a very interesting field of inquiry is opened in reference also to the congenital defects of gland function, as in ichthyosis; the modification of function by constitutional peculiarities as exhibited by the hyperproduction of sebum by strumous subjects; the results of undue stimulation by baths, and by medicinal substances used both externally and internally, the effects of blood-poisons, and the influence of defective or disordered nervous influence.

The Hair-follicles.—The contained hairs, the follicles themselves, and their linings and walls, are subject to a number of important changes, and these are mostly primary. The hairs may be hypertrophied, or atrophied, or be texturally changed, as in fragilitas crinium, or be invaded and rendered dull, dry, swollen, split up, and brittle by the invasion of fungi, etc. The epithelial linings are augmented as to their cell-elements in psoriasis, lichen planus, etc., and rodent ulcer probably takes origin chiefly from the outer root sheath of the hairs. The fibro-cellular texture and contained vessels of the walls participate in congestive changes, which also attack at the same time the non-follicular part of the skin, as in the inflammations; and they are also at times the

seat of primary congestive and inflammatory changes produced under the influence of irritants of all kinds, such as scratching, heat, friction, becoming definitely inflamed in sycosis, and under special conditions of weak health. The periacinous lymphatic channels and tissue participate in the changes in lymphatic diseases generally.

Such is a brief sketch of the general nature and character of the minute changes in the skin and its several textures. It is only intended as a sketch to convey to the student a general idea of the origin, connection, and sequence of such changes. We believe it will be useful to beginners in dermatology. But it is important to note, in making use of the pathological data of any given disease, that these must be estimated in the mass and as a whole, not piecemeal in short, and also in connection with clinical facts. There is a fashion in vogue of trusting too much to the microscope in dermatological research; signal error is the result.

SECTION III.

CLASSIFICATION, OR DIAGNOSTIC CHART OF SKIN DISEASES.

The following list, or semi-chart, conveys a good, general idea of the various eruptions met with in the skin, regarded from a clinical point of view. The list comprises:—

1. Eruptions occurring in connection with the acute specific or zymotic diseases, including the *variola* rash, *roseola variolosa*, *vaccinia* and *roseola vaccinia*, the rashes of *typhus*, *typhoid*, *rubeola*, *rubeola notha*, *scarlatina*, *glanders* and *farcy*, and *dengue*. These are important in reference to the differential diagnosis of skin diseases.

2. Eruptions, the local manifestations of diathetic states, comprise *scrofuloderma*, or scrofulous inflammation; *syphilodermata*, or syphilitic eruptions; *leprous* eruptions; *frambæsia* or yaws; *eruptions* occurring in connection with *endemic cachexiæ*, such as Oriental Sore, the Paranghi disease of Ceylon, etc.

3. Local inflammations, comprising :—

Erythematous inflammation; the chief feature consisting in the presence of hyperæmia, mainly affecting the papillary layer, with or without some slight consequent effusion of serosity, swelling of the *rete* cells, rarely vesiculation, but subsequent desquamation. The chief erythematous diseases are :—

Erythema, intertrigo, roseola, and urticaria.

Catarrhal inflammation, characterized by vascular excitement, with serous effusion into the corium, together with the escape of leucocytes into the same tissue from which pus is subsequently produced, giving rise to sero-purulent discharge and crusting. Under this head rank :—

Eczema and impetigo.

Plastic inflammation, essentially papular, due to effusion of plastic lymph into the papillary layer, and sometimes the deeper dermic layer; including—

Lichen and prurigo.

Bullous inflammation, the chief feature being the development of bullæ as an *essential* phenomenon. It includes

Herpes, pemphigus, and hydroa.

Suppurative inflammation, characterized by the development of pustules, superficial and painless, or deeply seated and painful. It comprises—

Impetigo contagiosa, ecthyma, and furunculus.

Squamous inflammation, characterized by hyperæmia of the derma, and hyperplastic growth of cuticle, with a varying amount of secondary thickening. This group includes—

Pityriasis rubra and psoriasis.

4. Hypertrophic and atrophic diseases:—**A. Hypertrophic.**

I. In which the epithelial layers are mainly affected.

Pityriasis, xeroderma, ichthyosis, warts and corns.

II. When the connective tissues of the skin are specially involved—

Keloid, fibroma, morphæa, and scleroderma.

III. Vessels of the skin affected primarily:—

1. The arteries and veins—*teleangiomata*.

2. The lymphatic vessels—*lymphangiomata*.

B. Atrophic.

Senile atrophy, linear atrophy, general marasmus.

5. New formations, the characteristic being the growth of new tissue made up of granulation cells, or altered and proliferating connective tissue of epithelial cells, cells which invade, destroy, and finally replace the healthy structures, the new growth itself undergoing degenerate changes in due course.

Lupus, cancer, rodent ulcer, and xanthoma (?)

6. Hemorrhagic disorders (cutaneous), consisting of effusion of blood, in points or patches, uninfluenced by pressure.

Purpura.

7. Neuroses, in which the nerves are primarily disordered, with or without organic changes at the outset.

A. Functional.—*Hyperæsthesia, anæsthesia, and pruritus.*

B. Organic.—*Neuromata, nerve nævus, and secondary changes in other disorders.*

8. Pigmentary alterations. There are two groups: (1) those consisting primarily of deposit or alteration of pigment in the rete, as in *Melasma, leucopathia*, etc.; and (2) cases of pigmentation, *secondary* to other diseases, as in Addison's disease, and the like.

9. Parasitic diseases, which comprise:—

- A. *Animal*, illustrated by *scabies*, *phthiriasis*, eruptions due to gnat-bites, fleas, etc.; abscess due to *filaria*, etc.
- B. *Vegetable*, including *tinea favosa*, *tinea tonsurans*, *tinea circinata*, *tinea kerion*, *tinea versicolor*, *tinea sycosis*, *tinea decalvans*, and *onychomycosis*.

10. Diseases of the glands and appendages are divisible into:—

- A. *Diseases of the sweat glands and follicles*, as excessive secretion (*hyperidrosis*); diminished secretion (*anidrosis*); altered secretion (such as *chromidrosis*, colored sweating, and *osmidrosis*, offensive sweating); and those which may be termed congestive and inflammatory, as *miliaria*, *sudamina*, *lichen tropicus*, *strophulus*, *dysidrosis*, *hydroadenitis*, and sweat cysts.
- B. *Diseases of the sebaceous glands*, as excessive secretion (*seborrhœa*); diminished secretion (*asteatodes*); altered secretion, with or without retention (*allosteatodes*, *exanthelasma*); retention of secretion without inflammation (*molluscum*, *horns*); slight retention with inflammation (*acne*).
- C. *Diseases of the hair and hair follicles*, as excessive growth (*hairy nævi*, *moles*, *hirsuties*); diminished growth, constituting partial or absolute baldness (*alopecia*); textural alteration (*fragilitas*); inflammation of the follicles (*sycosis*).
- D. *Diseases of the nails*, including changes occurring in *syphilis*, *lichen ruber*, *general eczema*, *psoriasis*, *pityriasis rubra*, and *struma*; inflammation of the matrix, as in *onychitis*; or in the parasitic disease termed *onychomycosis*, caused by the favus parasite (the *trichophyton*); also hypertrophy, atrophy, and corn of the nail.

There are, then, ten groups of skin disease, viz.: the Eruptions of the Acute Specific Diseases; Local Inflammations; Diathetic Diseases; Hyper- and A-trophic Diseases; New Formations; Hemorrhagic, Neurotic, and Pigmentary Diseases; Disorders of the Hair and Glands and their Appendages. Such is the clinical classification that may be given at an examination. Every skin disease must fall into one of these groups, and it soon becomes an easy matter to refer any disease before the observer to its proper class.

[PECULIARITIES OF SKIN DISEASES IN THE UNITED STATES.

It is a well-known fact that a malady often undergoes definite modifications under changed external conditions, such as altered climatic and hygienic surroundings. Indeed, the subject of the geographical distribution of disease has ever afforded an attractive field for the medical philosopher; furnishing, as it does, data which, if thoroughly appreciated, may prove to be valuable evidence both as to the etiology and the claims for specific character of certain disorders. The medical profession in the United States have no reason to be ashamed of the labors and results of those of their number who have especially cultivated the subject of skin diseases; for their recorded observations and careful investigations have contributed materially to the progress of modern dermatology and its establishment upon sound scientific principles. From their experience we learn that there are not only some generally recognized variations in type of certain skin affections, but also that there are others, which, though quite frequent in their occurrence in Europe, are rarely met with in America, and *vice versa*.

A general agreement among dermatologists upon the subjects of pathology and nomenclature of skin diseases would alone enable such a rigid contrast to be made as would completely satisfy the demands of science. Such an exact com-

parison is not practicable at present, although a rapidly increasing consensus of opinion among systematic writers upon these subjects, more particularly observed in the last quarter of a century, warrants the hope that this may be accomplished in the near future.

In the mean time we may, in a general way, formulate the prominent characteristics of skin disorders as they occur in this country. Prof. James C. White,¹ of Harvard, from a careful study of American statistics and extended personal observation, has arrived at the following conclusions:—

I. Certain obscure affections the etiology of which is little if at all understood, even in those parts of Europe to which they are mostly confined, may be regarded as practically non-existent among us. Such are *prurigo*, *pellagra*, and *lichen exudativus ruber*.

II. Certain diseases, directly connected with and dependent upon poverty and habits of personal uncleanness, are less prevalent in the United States than in those parts of Europe of which we have sufficient statistical information for a comparison. Examples of this class are the animal parasitic affections especially.

III. Some cutaneous affections of grave character, which are dependent upon or form a part of serious constitutional disorders, are of less frequent occurrence amongst us than in Europe in general, or those parts of it where they are endemic. *Lupus*, the *syphilodermata* (?), and *leprosy* are the most marked instances of this class.

IV. Certain disorders of the skin, especially those of its glandular systems and those connected more immediately with its nervous system, are apparently more prevalent with us than in Europe. The most notable examples of the former are *seborrhœa*, *acne*, and possibly the heat-rashes; of the latter, *herpes*, *urticaria*, and *pruritis*.

¹ Trans. Int. Med. Congress, 1876; Phila., 1877, p. 681.

In addition to these valuable observations, it may not be amiss to call the reader's attention to the limitation of leprosy (*elephantiasis græcorum*) within particular districts. Existing in India, China, Egypt, certain parts of Norway and Sweden and the Sandwich Islands, true leprosy is only very rarely encountered in the United States, and almost never in the person of a native. It may be found among immigrants in the Norwegian settlements in the Northwest; also among the Asiatics in California. It is also seen in Central America and Mexico, but is probably never endemic in this country.

Syphilitic skin diseases are common in America as in Europe, and when neglected are doubtless equally severe in their manifestations; but in this country they are less frequently accompanied by such profound degradation of the system under the influence of accompanying filth, poverty, and insanitary surroundings, than they are in foreign countries. *Lupus vulgaris*, according to Dr. Duhring, is much milder here than in Europe; and cases of *lupus erythematosus* are relatively much more common in America.

At the last meeting of the American Dermatological Association¹ the following CLASSIFICATION AND NOMENCLATURE was adopted:—

CLASSIFICATION AND NOMENCLATURE OF DISEASES OF THE SKIN.

ADOPTED BY THE AMERICAN DERMATOLOGICAL ASSOCIATION.

CLASS I.—DISORDERS OF THE GLANDS.

1. *Of the Sweat Glands.*

Hyperidrosis.

Bromidrosis.

Miliaria crystallina.

Chromidrosis.

Anidrosis.

¹ Held at Saratoga, August, 1879.

2. *Of the Sebaceous Glands.*

Seborrhœa.	Cysts.
(<i>a</i>) oleosa.	(<i>a</i>) milium.
(<i>b</i>) sicca.	(<i>b</i>) wen.
Comedo.	Molluscum sebaceum.
	Diminished secretion.

CLASS II.—INFLAMMATIONS.

Exanthemata.	Pityriasis rubra.
Erythema simplex.	Lichen.
Erythema multiforme.	(<i>a</i>) planus.
(<i>a</i>) papulatum.	(<i>b</i>) ruber.
(<i>b</i>) bullosum.	Eczema.
(<i>c</i>) nodosum.	(<i>a</i>) erythematosum.
Urticaria.	(<i>b</i>) papulosum.
Furuncle.	(<i>c</i>) vesiculosum.
Anthrax.	(<i>d</i>) madidans.
Phlegmona diffusa.	(<i>e</i>) pustulosum.
Pustula maligna.	(<i>f</i>) rubrum.
Herpes.	(<i>g</i>) squamosum.
(<i>a</i>) facialis.	Prurigo.
(<i>b</i>) progenitalis.	Acne.
Herpes zoster.	Impetigo.
Psoriasis.	Impetigo contagiosa.
Dermatitis. ¹	Impetigo herpetiformis.
(<i>a</i>) traumatica.	Erysipelas.
(<i>b</i>) venenata.	Ecthyma.
(<i>c</i>) calorica.	Pemphigus.

CLASS III.—HEMORRHAGES.

Purpura.	
(<i>a</i>) simplex.	(<i>b</i>) hæmorrhagica.

¹ These indicating affections not properly included under other titles of this class.

CLASS IV.—HYPERTROPHIES.

1. *Of Pigment.*

Lentigo.	Chloasma.
	(a) locale.
	(b) universale.

2. *Of Epidermal and Papillary Layers.*

Keratosis.	Cornu cutaneum.
(a) pilaris.	Verruca necrogenica.
(b) senilis.	Xerosis.
Callositas.	Ichthyosis.
Verruca.	Ichthyosis of nail.
Clavus.	Hirsuties.

3. *Of Connective Tissue.*

Scleroderma.	Rosacea.
Sclerema neonatorum.	(a) erythematosa.
Morphœa.	(b) hypertrophica.
Elephantiasis Arabum.	Frambœsia.

CLASS V.—ATROPHIES.

1. *Of Pigment.*

Leucoderma.	Vitiligo.
Albinismus.	Canities.

2. *Of Hair.*

Alopecia.	Alopecia furfuracea.
Alopecia areata.	Atrophia pilorum propria.

3. *Of Nail.*4. *Of Cutis.*

Atrophia senilis.	Atrophia maculosa et striata.
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CLASS VI.—NEW GROWTHS.

1. *Of Connective Tissue.*

Keloid.	Neuroma.
Cicatrix.	Xanthoma.
Fibroma.	

2. *Of Vessels.*

Angioma.	Angioma cavernosum.
Angioma pigmentosum et atrophicum.	Lymphangioma.

3. *Of Granulation Tissue.*

Rhino-scleroma.	Syphiloderma.
Lupus erythematosus.	(a) erythematosum.
Lupus vulgaris.	(b) papulosum.
Lepra.	(c) pustulosum.
(a) tuberosa.	(d) tuberculosum.
(b) maculosa.	(e) gummatosum.
(c) anæsthetica.	Carcinoma.
Scrofuloderma.	

CLASS VII.—ULCERS.

CLASS VIII.—NEUROSES.

Hyperæsthesia.	Anæsthesia.
(a) pruritus.	
(b) dermatalgia.	

CLASS IX.—PARASITIC AFFECTIONS.

1. *Vegetable.*

Tinea favosa.	(b) tonsurans.
Tinea trichophytina.	(c) sycosis.
(a) circinata.	Tinea versicolor.

2. *Animal.*

Scabies.	Pediculosis corporis.
Pediculosis capitis.	Pediculosis pubis.—ED.]

SECTION IV.

THE CAUSES OF SKIN DISEASES.

In the previous section a general summary was presented of the different varieties of skin diseases in the form of a tabular classification. In this section a sketch of the *causes* of these diseases will be given; they may be conveniently ranged under two heads:—

1. Those which act from within the system, or *internal* causes.

2. Those which act from without, or *external* causes.

There are some who think that the latter are much more frequent in their operation and much more potent than the former, but it is very doubtful if such is really the case.

It must be remembered that a combination of these may constitute the real cause of a skin disease. But it will be useful to consider the two classes separately for the moment.

A. Internal Causes.—Amongst these the most important are:—

a. Hereditary tendency to a given disease, such as in the case of *ichthyosis* or *psoriasis*. It may give rise to a purely local affection, or to a more or less general disease—*i. e.*, one involving the skin locally and the general health as well.

b. Blood poisoning, by certain animal or vegetable poisons, inducing specific eruptions, as in the acute specific diseases, syphilis, or disorders derived from eating shell-fish and some other articles of food. It often results from deficient excretion, or the undue retention of biliary, renal, or intestinal excreta, giving to the blood an acrid character. It may be also brought on by long-continued dyspepsia, either from dietetic errors or otherwise; by the presence of

medicinal substances in the blood (*e. g.*, potassium bromide, belladonna, or copaiba); by the accumulation of lactic or uric acids, as in rheumatism and gout, which often excite eruptions or impart an inflammatory character to them; by poverty, which depraves the blood and leads to cachexia; by the imperfect fulfilment by certain organs of their natural functions, as menstruation, perspiration, and the hepatic or renal excretion.

c. Nerve disturbance, which acts in one of four ways. Firstly, by inducing changes in the calibre of the vessels by which the blood supply and fluid transudation are affected, as in the erythemata. Secondly, by directly encouraging tissue change, as in *herpes*, *hydroa*, *pemphigus*, and *prurigo*. Thirdly, by the loss of control over the skin nutrition, which follows from nervous debility, allowing morbid action of all kinds in the skin to take place more readily. Fourthly, by the transmission of irritation through reflex action, by which eruptions may be excited or aggravated.

d. An acquired, innate, or rather an actual, disposition in the skin tissues themselves to take on a diseased condition. This is a point on which special stress is laid. It is pretty certain that many diseases of the skin must originate in a disordered behavior of the tissues themselves, and do not necessarily depend for their cause upon any general defect of nutrition. For instance, *cancer* is a case in point; and so with warty growths of all kinds, such as *fibroma*, *keloid*, and perhaps *lupus*. In some cases there is simply an excess of growth, a *plus* state of the nutrition of the tissue and nothing more; or it may be a *minus* condition. In other instances it is a *perverted* nutrition, a deviation in the type of the tissue, as in cutaneous cancer. In fact, Group 4, and many of the diseases in Group 10 of the classification given in the preceding section illustrate this point.

It is asserted by most writers that hypertrophy and atrophy, the simpler and homologous changes, are, in reality,

merely the consequence of the presence in the blood of a greater or less amount of the pabulum of the particular tissue affected. But if these pabula be in excess, which has not been satisfactorily proved, the hypertrophy would not occur unless the tissues were thus disposed to appropriate and use them more freely than usual; and if such a disposition existed in a degree less than that in healthy nutrition, atrophy would result. So that, after all, the formative capacity, or the assimilative activity, of the tissues themselves is an important element in these *plus* and *minus* states of growth. The explanation given above—viz., that the tissues themselves are hyperactive in the diseases in question—may, therefore, be true, and certainly if the tissues themselves exhibit a tendency to hyperplasia, nature will answer the demand for an increased supply of pabulum.

In the case of *perverted* nutrition or heterologous formations, the changes it seems to us are as readily explained by a primary modification of the same "formative capacity" as by the supposition of an altered character of growth, the immediate consequence of the supply of a special kind of pabulum.

e. Climacteric or endemic influences induce skin disorder by depraving the nutrition of the body in particular ways, as in *elephantiasis arabum*, *frambæsia*, or by affording opportunity for the operation of special endemic causes, such as special parasites, ex., the filariæ, etc.

B. External Causes.—Some of these influence the general health for evil, and so disorder the skin indirectly; others act directly upon the skin.

1. Among the external causes acting *directly* upon the skin, the most important are: *Scratching*, which may excite and always aggravates disease, especially if it happen to be of an inflammatory nature; and which may, in contagious cases, spread it from place to place, as in *scabies* and *im-*

petigo contagiosa. *Local irritants* of all kinds—ex., cold, heat, friction, flannel worn next to the skin, irritants, plasters, fluids, and applications of all kinds; irritating substances, such as lime, sugar, flour, washing soda producing bricklayers', bakers', grocers', and washerwomen's itch; unwholesome handicrafts; dyes, contusions, animal and vegetable parasites of all kinds; medicinal applications and *want of care of the skin* in the dirty and ill-fed, are fruitful sources of disease.

2. Amongst the external causes that act *indirectly* upon the skin, through their influence upon the general health, may be mentioned: Neglect of cleanliness, defective clothing, unsanitary surroundings, climatic influences, and the like; also animal poisons inoculated into the bodily surface, etc.

Clinically, as before hinted, it is of the highest moment to be acquainted with the fact that, as a rule, these several causes not only vary in character, but do not operate in a solitary or individual way. To put it in another shape; (1) these influences or agencies are, in reality, divisible into *predisposing*, *exciting*, *producing*, and *intensifying* causes; and further (2) the true cause of the state of any given disease is made up of a number of phenomena or agencies in combined operation. These are points of great practical importance in reference to the treatment of skin diseases.

In reference to the first, it may be said that many so-called local causes usually only predispose to, although they are thought to excite, eruption. For instance, debilitating occupations render a man much more liable to be affected by the handling of irritants; in a bad climate, the system generally is disordered in addition to the skin, and the latter is so rendered more liable to become diseased. Other causes act as pure excitants, as when there is a predisposition to a disease—*e. g.*, *eczema*, and the local irritant excites it, but probably would not if acting without the existing predisposition. Some influences, however, are really producers of disease, as

in the case of medical irritants, or circulated poisons—*e. g.*, *malignant pustule*, or parasites. Other agencies again only aggravate existing disease, as in the case of the wearing of flannel, or exposure, or scratching.

In reference to the second point, it is indisputable that, in most cases, several agencies or influences, external or internal in origin or operation, combine to make up the true cause of a disease, and it is the duty of the physician to recognize this fact and analyze very carefully the composite cause of skin troubles. In fact, in such correct analysis lies the source of all successful dermatological treatment. From a therapeutical point of view, diseases of the skin are very different things as portrayed on paper and as seen in the consulting-room. A disease may answer most perfectly to the typical description, but the remedies ordered for its cure may signally fail, because the analysis of its causation is incorrect or incomplete, or some coexistent condition which exerts an antagonistic action to the operation of the remedies prescribed may have been overlooked, as is the case when neglected constipation so often defeats the proper action of tonics. Diseases are greatly modified as they occur in different subjects, and it is not the uncomplicated type that is to be dealt with in practice, but the disease modified and influenced by the many concomitant conditions of age, constitution, occupation, etc.

It may be useful to mention a few common combinations met with clinically, which illustrate the multiform character of the causation of skin diseases, as seen in the consulting-room. In the case of eruptions provoked by local irritants, referred to above, there is very frequently debility present in those who are attacked by these eruptions. This debility favors the development and tends to promote the chronicity of the disease, and must be removed if the eruption is to get well, and if it is to be cured in the best way possible. In fact, the skin of a healthy person will resist the action of

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many of the local irritants specified, but the skin cannot do so if the subject be weak and debilitated; so that it is an important point to give tonics as the rule in cases of eruptions excited by local irritants. This simple combination of causes, debility and local irritants, is often found to induce *erythema*, *eczema*, *lichen*, etc. Other examples of concurrent causes must readily occur to the reader, such as *eczema* in a gouty subject, modified by neglect and scratching; *psoriasis* in a strumous subject, in whom the tendency to the disease is hereditary; *erythema* in a rheumatic subject, in connection with dyspepsia; *eczema* occurring in cooks exposed to the irritating influence of the fire, whilst the patient also has a blood current charged with retained excreta, in consequence of inefficient bowel and kidney action; *lupus* in a scrofulous subject; *tinea tonsurans* in a boy with persistent anæmia and a phthisical tendency; *pruritus* in connection with senile atrophy of the skin, liver derangement, gout, or it may be in connection with diabetes. Indeed, examples might be multiplied almost indefinitely.

In estimating therefore the cause of any given cutaneous disease, attention must be paid not only to predisposing and exciting causes, but to coincident occurrences and accidental concomitants which modify such disorder; for it is not in the abstract that the disease is to be regarded, but in its entirety, and in all its clinical features and behavior. The correct estimation of a disease after this fashion constitutes the true diagnosis, upon which a few remarks will be made in the next section.

SECTION V.

DIAGNOSIS.

Firstly.—In making a diagnosis the observer should apply the important rules laid down (Section I.) for examining skin diseases—that is to say, he should examine the whole of the eruption and not a part only, and also trace carefully its history, to discover the nature of its beginning, the character of its stages, if any, and their transitional relationships, and the general course of the eruption up to the time of observation.

Secondly.—The observer must proceed to determine to which class the disease belongs, according to the principles laid down in the chart in Section III. He should inquire in the first place whether the eruption belongs to one of the Acute Specific Diseases. If this be so, then the constitutional condition will be by far the most pronounced, the patient more or less prostrated, the temperature unusually high, whilst other pyrexial symptoms will be marked and out of proportion to the mere rash; the access of the malady will have been *comparatively* sudden, and so on. If the eruption be essentially erythematous, then it must be one of four conditions—viz., *erythema*, *intertrigo*, *roseola*, or *urticaria*. Is the disorder accompanied by sero-purulent discharge, by the development of bullæ, by pustules, or by squamæ alone? Then the disease is one of those comprised under local inflammations. Is the eruption part of a cachexia, or some special diathetic condition present? Then it belongs to Group 2. And in like manner Hypertrophies or Outgrowths of Tissue, Atrophies, New Formations, Hemorrhagic Spots, Neurotic conditions without organic changes,

Pigmentary Alterations, Parasitic Diseases, and Affections of the Glands, Hair, and Nails will be put under their respective groupings. In the case of New Formations, the diagnosis is singularly easy. The youngest student can readily distinguish the newly-formed fleshy mass of a neoplasm in the skin from the ordinary, rapidly-formed, semi-hyperemic, inflammatory deposit of a similar size; and he knows practically that he has a case of *syphiloderma* or *lupus* to deal with. Further, in making a diagnosis, the observer must remember to determine whether the disease is, or is not, complicated by another, as evidenced by an admixture of different characters, and to thoroughly sift out the nature of any constitutional modifying influences.

Thirdly.—An estimate of the *immediate or exciting* cause of any given eruption is of the first importance in a complete diagnosis. No doubt, when the observer has been able to put the disease before him into its proper class, a pretty correct indication is obtained of its causes, especially as regards Classes 1, 2, 4, 5, 6, 9 (Section III.); yet, unfortunately, the difficulty is greater with the eruptions of the commonest occurrence, comprised in Class 3, or the local dermal inflammations, and with those in Classes 7, the Neuroses, and 10, the gland and hair disorders. Hence the observer must proceed on the lines laid down in Section IV., working out the specific cause, and inquiring into the production of the eruption from within or without. His object is to seek for the source in (see Section IV., A) an hereditary tendency, a condition of blood poisoning, nervous disturbance, a disposition in the tissues themselves to take on a diseased condition, or perhaps some climatic influence. If not, then the cause is to be sought for in local agencies as detailed under B (Section IV.). And at the same time the observer should bear in mind what has been said about the multiple character of the causes of skin diseases. By attend-

ing to these several points the diagnosis will be worked out correctly and with facility.

SECTION VI.

GENERAL PRINCIPLES OF TREATMENT.

If, as has been already stated, there is nothing essentially special in the pathological changes that occur in skin diseases, it follows that there can be little that is absolutely special in the treatment. The minor differences that do exist, arise from the fact that the skin can be irritated directly, and that the diseased parts become rapidly dry, harsh, cracked, etc., from the constant exposure to the air, so that they need to be kept protected and supple by the use of *moistening* applications. Otherwise the general principles of therapeutics are applicable to the case of skin maladies, and it is necessary for the reader to mentally lay firm hold of this fact.

A correct diagnosis must of course precede successful treatment. When in accordance with the rules already laid down a given disease has been placed in its proper clinical class, and the exciting and other causes discovered, the proper kind of treatment naturally suggests itself.

It may be said, indeed, that the ten groups of skin diseases require three main methods of treatment—viz., a purely local one; one almost wholly general; or a mixed kind, *i. e.*, one partly local and partly general. That is, indeed, saying in other words that skin diseases are made up of those which are essentially local in nature, those essentially general, and those more or less local in their main features, but influenced by general conditions. In the first category may be placed Groups 4, 5, and 9, viz., the hypertrophic and atrophic, the neoplasmata, and parasitic diseases;

in the second Groups 1 and 2, the eruptions of the acute specific diseases, and the local manifestations of diathetic diseases ; and in the third Groups 3, 6, 7, 8, and 10, viz., local inflammations, hemorrhagic, neurotic, pigmentary disorders and most of the glandular disorders.

In dealing with the diseases in the first category, viz., Groups 4 and 5, absorbent or astringent remedies to promote resolution, or removal by caustic or surgical means, constitute the treatment. In Group 9, parasiticides are to be employed to kill the insect or fungus which produces the particular disease present. In dealing with the components of the second category, viz., Group 2—for we need not touch on Group 1—specific remedies are used : in *scrofuloderma*, cod-liver oil ; in *syphilis*, mercury and iodide of potassium ; in *leprosy* and *frambæsia*, hygienic measures and so-called “specifics.” So far all is clear.

When we come to the third or mixed class, or category, of cases indicated above, the principles of treatment are more varied. Groups 6, 7, 8, and most of the diseases comprised in 10—for some must be dealt with as local inflammations—are consequent on what may be conveniently termed debility, and the treatment consists of the use of general tonics, etc. It is not necessary here to add more about them, as they are among the more infrequent of skin maladies. As regards, however, Group 3, viz., local dermal inflammations and certain of the components of Group 10, such as *sycosis* and *dysidrosis*, the case is different, for the diseases comprised in it contain, as will be seen at a glance, almost all the ordinary forms of skin diseases, and it is amongst these the greatest difficulties are met with, owing to their many causes of excitation, aggravation, and modification. Now the diseases comprised in this Group 3, are essentially inflammatory, but some run a course of definite duration, as in *herpes* and *roseola*, and hence require only watching to prevent interurrences ; or for the alleviation of special symptoms and

conditions, such as pain or disfigurement. The majority, however, run an indefinite course, and are to be attacked by therapeutic measures, based upon a consideration of the varying combination of exciting, aggravating, or modifying agencies. The treatment, therefore, of the components of Group 3, and those of Group 10, before specified, consists in a careful combination of both local and internal remedies.

As regards *local* remedies, there are three main rules to be observed, viz. :—

(1) Whenever active hyperæmia is present, be the disease what it may, applications of a *stimulating* nature should not be used, but the treatment should be essentially *soothing*, otherwise the inflammatory symptoms will be increased, and the disease aggravated and probably spread. The vessels, especially in the earlier stages of congestive diseases, are very sensitive to stimuli—and they readily contract and dilate under their influence. The tonicity of these vessels is soon lost with any great increase of dilatation, and its consequences, under these circumstances, whilst the area of the congestion is widened by the sympathetic action of the irritants upon the parts in the neighborhood of the original seat of disorder. Soothing remedies have contrary effects.

(2) The action upon the skin of all external irritants—such as scratching—should be prevented, and the air even excluded from inflamed or excoriated surfaces, especially by oil-packing.

(3) Not until the stage of active hyperæmia has fairly passed should astringents, stimulating applications, or revulsives be employed. These, and absorbents, are to be reserved for the stages of vascular sluggishness and inflammatory induration and thickening, when not only the capillaries, but the lymphatics require stimulation with a view to promote the absorption of morbid products.

As regards internal or general remedies, it is proposed to indicate below, in as practical and concise a form as possible,

the conditions which should be taken into consideration in framing the treatment of such diseases as *erythema*, *intertrigo*, *urticaria*, *eczema*, *lichen*, *prurigo*, *pemphigus*, *hydroa*, *ecthyma*, *furunculus*, *pityriasis rubra*, and *psoriasis*; and inflammatory conditions of the glands and hair follicles, such as *acne*, *dysidrosis*, and *sycosis*, which are analogous in pathological nature to, and only differ in regard to their anatomical seat from, those preceding. The following short sketch or chart, inasmuch as it applies to the great majority and most common forms of skin diseases, should be used regularly in determining the treatment, which must necessarily vary with the different combinations of influencing agencies referred to.

We may observe that we invariably mentally employ this analytical chart or summary in dealing with cases of inflammatory skin diseases in our consulting room. Having first determined by inspection and interrogation the general origin, course, and symptoms of a disease—that is, having made a bare diagnosis, we proceed to discover the presence and degree of influence of one or many of the several modifying conditions which we are about to notice briefly in detail; and then we prescribe not only the treatment appropriate to the disease itself in the abstract, but so modified or amplified as to meet the necessities of each case in regard to the existence of any of these special conditions. We desire to treat the patient's disease in the light of the patient's peculiarities, and the success of treatment so formulated is ample testimony to the importance of the rule laid down.

The conditions here referred to are :—

A Syphilitic Taint.—This tends to induce induration from the presence of syphilitic tissue; or it leads to ulceration, cachexia, and general debility—features which are *unusual* in the diseases which they complicate. This taint is sometimes in operation in cases of *eczema*, *psoriasis*, *pemphigus*, *ecthyma*, *acne*, and *intertrigo* (of infants).

Constipation.—This causes dyspepsia, liver torpor, and retention of excreta, and so leads to an impure blood current, by which eruptions are aggravated, and to debility. It occurs, of course, in all forms of skin diseases, and it is impossible to overrate the importance of attention to it. Constipation, besides leading to an aggravation of existing eruption, prevents the due exhibition of remedies, as in the case of many tonics, which can often be given in combination with aperients, but not otherwise, since, by their constringing effect, they, when unaided by aperients, give rise to dyspepsia, headache, and other symptoms. We mention these facts because they are of such frequent application in dealing with skin troubles.

Debility, including anæmia.—This retards recovery from want of recuperative power in the system; but frequently, important emunctory and assimilative organs perform their functions languidly or imperfectly as a consequence of the debility; and so, as a consequence of the retention of unoxidized or effete products, the blood becomes charged with irritating *materies morbi*. It is especially operative in *furunculus*, *eczema*, *psoriasis*, *lichen*, *pityriasis rubra*, *pemphigus*, *urticaria*, and *ecthyma*.

Diabetes.—This increases inflammatory conditions, favors the occurrence of phlegmonous inflammation, and leads to freer development of disease, and tends to chronicity of eruption. Its influence is often seen in *eczema*, *psoriasis*, *intertrigo* in adults, *furunculus*, and *anthrax*.

Dyspepsia.—This induces debility. It also leads to liver disturbance, and impurification of the blood; and it increases hyperæmia by reflex action, as in *acne*. It is common in connection with *eczema*, *urticaria*, *acne*, and *sycosis*.

Errors of Diet.—These introduce special irritative substance into blood, cause dyspepsia, lead to accumulation of nitrogenous matters in system, to liver disorder, etc., and are

operative in all forms of inflammatory eruptions without exception.

Gouty and Rheumatic Diatheses.—These cause accumulations of uric and lactic acids and allied compounds in the blood, which give an inflammatory character to disease. They influence especially *eczema*, *psoriasis*, *lichen*, *ecthyma*, *sycosis*, and *urticaria*.

Lack of Hygiene.—This disposes to torpor of skin. It favors the occurrence of morbid action and disease, and greatly influences *acne*, *sycosis*, *eczema*, *intertrigo*, and *erythema*.

Repression of the special normal eliminatory functions. This throws the necessity of compensatory elimination on the skin, which may fail to respond, and so become diseased. It favors increase of fluid in the tissues of dependent parts. It occurs in *furunculus*, *ecthyma*, *acne rosacea*, and *eczema*.

Retention of Excreta, from kidney, liver, and bowel inactivity. This, a most fertile source of skin irritation, which it both excites and increases by leading to the accumulation of effete products or *materies morbi* in the blood, gives the blood an irritative quality, which aggravates hyperæmia in all inflammatory skin diseases. It is a common cause of *pruritus* of the skin. It also leads, in the case of kidney torpor, to increase of watery fluid in tissues, as in *eczema* of the legs.

Strumous Diathesis.—This imparts an unusual purulent character to eruptions, and favors the implication of the connective tissues. It operates powerfully and commonly in cases of *eczema*, *psoriasis*, *acne*, and *sycosis*.

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PART II.

THE DETAILED DESCRIPTION OF CUTANEOUS DISEASES, ARRANGED IN THEIR ALPHABETICAL ORDER.

Acne.—This disease is an inflammation of the sebaceous glands, the ducts of these glands, and the periacinous fibro-cellular tissue to a varying degree. The upper part of the hair-follicle, into which the glands discharge, becomes necessarily involved in the inflammation.

The varieties of acne are said, commonly, to be four in number, viz., *Acne punctata*, *A. simplex* or *vulgaris*, *A. indurata*, and *A. rosacea*, but the latter is a compound of acne and hyperæmia of the face tissue generally. The first three of the four forms of acne arise directly from accumulation of sebum, more or less altered perhaps in quality, in the glands and their ducts. But besides these varieties, there are unusual or *artificial* phases of acne produced by the special irritation or stimulation of the glands by certain medicinal substances, including iodide and bromide of potassium when taken internally, and tar when applied externally. Acne of a special kind is also induced by the syphilitic poison in action upon the skin, and lastly there is a peculiar acne incident to a low condition of health, to which Hebra has given the significant term *acne cachecticorum*.

Acne in the commoner varieties, as we have already indicated, results immediately from the retention of sebum, the retained plug which is discolored by dirt, being designated *comedo*. It is important to point out certain special conditions, which favor the retention or non-excretion of the

sebum in acne. These are three; the first is inactivity or torpor of the skin; the second is undue production of sebaceous material; and the third is the formation of sebum of greater consistency than usual. This last is practically the most important of the trio; for without this tendency acne would be uncommon. The disposition to the secretion of sebum of a less oily or more fatty character is met with in lymphatic and strumous subjects, especially about the time of puberty, when the hair follicles and their attached sebaceous glands are in a state of physiological activity in connection with the free formation of hair, and are, in consequence, easily disposed to become the seat of disorder. The sebaceous plug, or comedo, which is the early and first sign of acne, may exist without much attendant change in the gland-wall, or tissue around the latter; but as a rule it soon undergoes a chemical change, whereby the sebum acquires an acrid character, and thereby induces irritation and inflammation, which vary in extent and character according to the constitutional bias of the individual, and acne results. Acne, therefore, is a follicle plugged by an augmented sebum with a varying degree of attendant follicular and peri-follicular inflammation.

It should be mentioned here that ordinary acne attacks certain localities by preference, such as the face and the shoulders, but artificial, or syphilitic, or cachectic acne is more or less general in its attack.

We now proceed to give a brief description of each variety of acne.

Acne punctata.—In this form there is simple retention of more or less inspissated sebum forming *comedo*, whilst there is no decided inflammation of the follicle, but only a certain amount of prominence sufficient to form a pimple. It is common on the face, the shoulders, and front of the chest, and appears on young people of lymphatic and strumous temperament. The minute, discolored plug of sebum

may be readily squeezed from the follicle, and looks like a little grub.

Acne simplex or *vulgaris* is that form in which slight perifollicular inflammation and occasionally suppuration are added to the phenomena of retention of sebum or plugged follicles. It is an exaggeration of, or an inflamed, *acne punctata*, and occurs under similar circumstances. *Comedones* are found intermixed with the inflamed acne spots.

Occasionally acne is confined to the forehead and the region of the temple almost exclusively; it may assume the simple form, but now and then the pustules are flattish and more or less umbilicated, and after crusting they disappear and leave distinct scars behind, something like those of smallpox. This form is often obstinate, and is apt to recur. In some cases the scalp is also affected by similar spots seated at the hair follicles, and scattered more or less generally over the scalp, especially over the top and front parts. In consequence of the umbilication of the spots, the term *acne varioliformis* is applied to this phase of acne. It is not certain whether it is not syphilitic, at least syphilitic treatment is very efficacious with it. We reserve our opinion as to its exact nature. The term *acne varioliformis* has been also applied to *molluscum contagiosum*.

Acne indurata is a more severe form of the disease. It is characterized by the large size of the spots, and by their possessing considerable inflammatory induration at their bases, together with a certain amount of pain, lividity or violet-redness, followed by suppuration, and, it may be, crusting. The spots may be painful, and, when large, they leave pits or scars after their disappearance. It occurs in the same situations as the other two phases of acne, but it is altogether more severe and extensive. In some cases the acne spots are very much indurated and as large as full-sized peas, or even larger.

Acne rosacea is characterized by its bright red color, more

or less formation of new connective tissue about, with hypertrophy of, the glands; and by its occurrence in middle-aged persons oftentimes the subjects of menstrual disorder. The condition denominated *acne rosacea*, and called *gutta rosea* by Wilson, or simply *rosacea* by others, is, as stated before, scarcely a true acne. It consists of chronic hyperæmia of the face, attended mainly by the formation of red papules, due to effusion of lymph into the papillary layer of the skin. These papules show out from the general reddened surface as minute elevations like non-suppurating acne spots, and they present no central opening. The occasional presence, however, or intermixture of a certain number of true acne spots leads to the inference that the disease is really acne, whereas it is a mixed condition.

The hyperæmia present in the above described varieties of acne is especially intensified by dyspepsia, by errors of diet, and by local irritants. The inflammation, too, is modified by the strumous and syphilitic cachexiæ, which conduce to implication of the surrounding cellular tissue and to suppuration in *struma*, and to induration and ulceration in *syphilis*.

As regards unusual forms of acne a few words may be added here:—

Tar acne.—The use of tar to the skin externally is often followed by stimulation of the sebaceous glands, and the production of an acne-like eruption, but it has this peculiarity that the tar collects in minute amounts in the follicular orifices, so that the punctate points are black or treacly in aspect.

Bromide and iodide acne.—A description of these will be found under the head respectively of Bromide and Iodide eruption. The disease presents the aspect of *acne vulgaris* or *acne indurata* of bright color. It is specially characteristic of these forms that they do not attack the face only, but many different regions of the body; such as the back, the forearms, the lower limbs—a fact which should always excite suspi-

cion as to the cause of the acne. They alike appear and disappear with the exhibition or withholding of these drugs. *Syphilitic* acne is widely distributed, it is attended by ulceration of the acne spots, and forms part only of a series of syphilitic phenomena.

Cachectic acne occurs as a general acne in badly nourished or half-fed or scorbutic subjects. It is indolent, painless, of livid hue. It does not ulcerate, whilst the skin which it affects wears an unhealthy or cachectic look.

The differential diagnosis of acne is simple. The plugged follicle constituting comedo, and the simple forms of acne (*acne vulgaris*) are not liable to be mistaken for any other disease, for the comedones are peculiar to acne alone. *Acne indurata* and *acne rosacea* may be thought at times to be syphilitic, and may resemble *hydroa*, but syphilitic acne is not confined to the face or shoulders; it ulcerates, and is attended by other readily recognized syphilitic phenomena. Acne in strumous subjects ulcerates and leaves pits, but it is a uniform eruption, and not multiform or corymbose like syphilitic rashes; it attacks the ordinary seats of acne, and it is made up of indolent, livid, boggy-like indurations. *Hydroa* of the face may consist apparently of little indurations like *acne indurata*, scattered here and there, but they tend, if not scratched, to vesiculate; they have no comedo, that is, they are not follicular, but dermic in origin, and they are very pruritic, even from their earliest stage.

Treatment.—The objects in view in the case of the commoner varieties of acne, which we deal with alone here, are—*first*, to promote the loosening and removal of the plugs of sebum from the follicle (in *comedo* especially); *secondly*, to lessen the hyperæmia; *thirdly*, to restore tone to the vessels and to the general system; and, *fourthly*, to promote the absorption of inflammatory products. We now proceed to consider the several varieties of acne. In *acne punctata* the skin will often bear a good deal of stimulation with ad-

vantage, and hot water bathing with friction with mild soap and the use of an alkaline wash (45), or a weak alkaline pomade may be employed, or if this fail (67), cautiously used, and tonics, constitute the proper treatment, as the rule (see *Comedo*). In *acne simplex* it is necessary in the first place to remove dyspepsia, if present, by (97) before giving tonics such as (90), (107), or (108), or in anæmic subjects (94). Cod-liver oil should be prescribed in the strumous. Occasionally there is a loaded state of system, which is improved by diuretics, especially if the face is much congested, and the urine be scanty and loaded with urates. Locally the affected parts should be bathed with hot water twice a day, and soothed with (14) or (74), to reduce the hyperæmia, and presently stimulated with (64) or (66) diluted. In *acne indurata* similar internal remedies are required at first; or if the system be loaded (96) or (98); if there is much induration (85). In gouty subjects a little colchicum wine—5 drop doses—with a carbonate of magnesia and bitter infusion mixture will often be of value in the earlier congestive stages. Locally, it is best to soothe, as in *acne simplex*, and subsequently to remove the induration by the use of (47), (60), or (66); or, if necessary, each spot may be occasionally touched with acid nitrate of mercury. In *acne rosacea* it is necessary first to look to the state of the uterine functions, to remedy coexisting dyspepsia, debility, tippling habits, etc. Internally (95) may be given with advantage; locally (74) may be used, with the occasional application of acid nitrate of mercury to each spot, or (80) may be applied each night to very decided indurations. In some cases it is advisable to cut the vessels across with a lancet, and to apply collodion regularly for awhile, and after the parts have bled, to allay irritation or excessive hyperæmia in the first instance. This may be followed by (65) which is a very effective remedy. In indolent cases of extensive *acne rosa-*

cea and *indurata* (65) may be used every night or every other night.

Alopecia signifies **Baldness**, and may be partial or general: it is either *idiopathic*, i. e., the sole diseased condition present; or *symptomatic*, i. e., a secondary consequence of some other morbid state. When *symptomatic*, the baldness is usually a relative one, that is to say, it is rather a general thinning than actual total loss of hair in the affected part, and this form results from the disturbance of the nutrition of the part by inflammatory diseases—e. g., eczema; or by blood diseases—e. g., syphilis; or by parasites (*see* Tinea); or it is the consequence of general debility from other special cause. When *idiopathic*, baldness is usually complete in the part affected, and it is ascribed to atrophy of the affected parts, and failure in the re-formation of hair; but this failure or atrophy is itself often the consequence of general debility connected with the too rapid growth of young people. This form of alopecia usually takes the form of circumscribed areas of decided baldness (*areata* or *circumscripta*) which gradually extend in size and increase in number; at times the entire hair of the scalp, or even of the body, is lost, and that rapidly, but this is a comparatively infrequent occurrence. The skin in this alopecia is white. It is also less vascular and less sensitive than usual. This form of baldness is to be distinguished from baldness the result of the attack of parasitic fungi upon the hair.

Treatment.—In *symptomatic* cases the treatment of the secondary alopecia is that of the disease which induced it in the first instance, with local stimulation subsequently. In the idiopathic forms, where the entire hair is lost, little can be done save by continuous stimulation and attention to the general health. When more localized, however, good may always be effected by applying tincture of iodine daily for two or three weeks, or rubbing in an ointment composed of

two grains of bichloride of hydrargyrum to one ounce of lard, for a fortnight or so, and especially around the edges of the bald patches; then, or when minute downy hairs appear (129), or better (130), may be infriected with perseverance. At the same time appropriate tonics are to be prescribed, should there be anæmia or debility.

Anthrax or **Carbuncle** is a phlegmonous inflammation of the skin, with necrosis of the cellular tissue and indolent suppuration, the necrosed tissue forming many cores over the surface of the carbuncle, and being discharged, together with pus, through the several corresponding apertures. The surrounding parts are brawny, reddened, and indurated, and the vessels plugged. Carbuncles are painful, and exhaust by their irritation and accompanying discharge. Extensive sloughing and ulceration may occur, and even pyæmic symptoms. Their most common seat is on the back or back of the neck, and they may occur singly, or one or two together. The subject of them is usually much depressed in health, and occasionally of a diabetic habit.

Treatment consists in the application, in the early stage, of caustic potash, which we prefer, or the employment of a subcutaneous, or other free, crucial incision, with subsequent pressure and careful dressing.¹ Internally, the greatest attention should be paid to sustaining the strength of the patient, by food, medicines, or stimulants, as the case may require.

Area, see Alopecia.

[¹ The subcutaneous injection of carbolic acid into several points of the affected area, has been followed, in some cases, by very satisfactory results. The systematic application of adhesive strips so as to make pressure around the periphery of the carbuncle, with an emollient poultice covering its centre, is also highly recommended.—Ed.]

Atrophia Cutis, or atrophy of the skin, occurs under a variety of circumstances. It may be either a *primary* condition, or appear as a *secondary* phenomenon in other disorders. The secondary aspects are observed in a more or less localized form, in connection with the development and growth in the skin of *neoplasmata*, *e. g.*, the *lupoid* and the *syphilitic*; as a result of *ulceration* of all kinds in the skin, as in *variola*, *ecthyma zoster*; after *traumatic injuries*, etc.; and in a more general form atrophy of the skin results in certain cases of *scleroderma*, the simplest forms of *ichthyosis*, and senile decay. But the term atrophia cutis is more strictly applicable to primary conditions which may be congenital, but are usually acquired.

Hebra and Kaposi and E. Wilson have described, under the names respectively of *Xeroderma* and *General Atrophia Cutis*, a peculiar thinning and shrinking of almost the entire skin of the body, which it is very difficult to distinguish by words from the atrophic form of Scleroderma. It is so very rare that we refer the reader for details to the accounts of these observers.

A more frequently met with but far from common form of idiopathic atrophy is the so-called *Linear Atrophy* or *Striæ et Maculæ Atrophiciæ Cutis*. It assumes the aspect of bands or lines of thinning and wasting of the skin.

This *linear atrophy* is met with in the form of white or pinkish, shining, smooth or finely-reticulated, scar-like streaks or bands from half an inch to two inches broad by several inches long. They are depressed below the surrounding surface, and the skin is thinned so that the striæ are sometimes of a deep pink or even claret color. They are arranged close to one another in more or less parallel curved lines, and sometimes they are somewhat spiral. They occur most frequently near the anterior brim of the pelvis, over the gluteals, near the trochanter, on the thigh, and on the arms. We have recently met with a beautifully

symmetrical case occurring in the iliac regions, associated with the macular form on the thorax and shoulders. Usually their long axis does not correspond exactly with that of the limb or with the course of the nerves, but Mr. Wilson has recorded a case in which this existed.

The *macular* forms are similar in nature, and many are extremely like the abdominal marks in pregnancy, but they are round or oval, or in lines. They vary in size up to that of half a crown. Dr. Liveing has lately described a primary red *hypertrophic* stage to this form of linear atrophy, the occurrence of which he states is overlooked, and he objects therefore to this disease being considered a pure atrophy of the cutis. We have observed this stage ourselves.

The exact etiology of this affection is very obscure, but it seems to depend on the cessation of the trophic nerve-influence in localized areas. The usual want of correspondence of the patches with the distribution of the nerves has been already referred to.

Kaposi has examined into the anatomy, and finds the epidermis atrophied, the papillæ disappeared, the bundles of the corium thin, the bloodvessels few and small, the sebaceous glands and hairs atrophied, and the fat gone from its framework.

Lanceolate broad stripes sometimes occur in *Morphæa* and *Scleroderma*, which are indistinguishable from linear atrophy, and such is the case also with the macular form. These latter are to be distinguished from the *abdominal marks of pregnancy* and from the marks caused by the distension of the skin by any tumors, etc. The marks are produced in these cases by the atrophy following a rupture of the deeper layers of the corium and subcutaneous tissue, and they are preceded by the signs of a ruptured vessel. The limited *cicatrices* left by destruction of tissue can hardly be a cause of confusion.

Treatment.—In the idiopathic form all that can be done

is to endeavor to induce a more active nutrition in the part affected by gentle stimulation, and to build up the health by general tonics, etc.

Bakers' Itch is a term which includes lichen agrius and chronic eczema of the hands. It is induced by the irritant action of the flour used by bakers, in debilitated subjects especially (*see* Eczema).

Treatment.—Patients are often considerably out of health, and have a loaded system, though they are debilitated. For such (95), or even (96), are to be given, and these may be followed up by tonics, such as (94) or (108). Locally the part may be first soothed by (76), or the linimentum calcis, or, if very itchy, by (40) or (42), and afterwards, when the inflammation is subdued, (69) or (78) may be employed.

Baldness, *see* Alopecia.

Barbadoes Leg, *see* Bucnemia.

Boils, *see* Furunculi.

Bricklayers' Itch is similar to bakers' itch, only that it is excited by the irritation of lime. It requires similar treatment to bakers' itch.

Bromide of Potassium Eruption.—The bromides, but particularly the potassium salt, in certain cases, even when only given to the extent of a few small doses, produce eruptions on the skin, which are essentially acneiform in character. The rash may resemble *acne vulgaris* in general aspect and situation, but usually, if not at first at least after awhile, the limbs or the chest, and even the scalp, are affected. It has always seemed to us that the skin is dirty and greasy-looking in persons suffering from bromide eruption. In some

cases the acne is more like well-marked *acne indurata* or *ecthyma*, since the cellular tissue about the sebaceous glands is more or less actively implicated in the inflammatory mischief about them, and in that case the base of the pustules is hard, tender to the touch, and somewhat painful. In place of any true comedos there is a collection of milky-looking fluid at the apices of the spots, which is very characteristic to those who have learned to recognize it. But there are severer aspects of bromide eruption. Occasionally oblong or roundish, softish, nodular, pinkish or bluish-red swellings, varying in size, appear about the face and neck, or extremities, perhaps any one or two appear at one time. In the early stage they seem to be dotted over with yellowish points, indicative of milky or cream-like fluid, really altered sebum, confined beneath the cuticle. These nodules sometimes dry away and crust over, but they may become large, and assume after awhile the aspect of a thickly dark-crust ed impetiginous patch or approach the aspect of *rupia*, after giving exit to a cheesy smegma, perhaps, which is altered sebum mixed with pus. In some cases I have seen decided and considerable ulceration induced. The swellings are painful, and leave behind dark-lined stains, and it may be cicatrices. It is a noticeable feature that in the severer forms of the eruption there are transitional stages present, showing the early and neutrally acneiform character of the eruption, as well as the later nodular and impetigo-like phase. The bromide spots originate in inflammation of one or many adjoining hair sacs and glands, the sebum being altered or increased in amount, the periacinous connective tissue being inflamed and indurated. The phases of the eruption are all due to variations in the number of gland sacs, the amount of discharge, inflammation, and crusting present in any given case. Neumann's microscopical observations are clear upon this point.

The *treatment* consists, of course, in withholding the bro-

mides from the affected individual, or, where this cannot be secured, in administering moderate doses of arsenic in conjunction with the bromide salt.

Bucnemia tropica, *see* Elephantiasis arabum.

Bug-eruption.—The attacks of bugs is a common cause of skin irritation in children, leading to pruritus and urticaria, conditions which are intensified, or appear at night. The bug-bites may often be detected as rosy papules with a central punctum. The remedy is to get rid of the bugs from the rooms or beds, whilst the pruritus they induce may be relieved by alkaline baths (14), (23), (43).

✓ **Cacotrophia folliculorum.**—In the London Clinical Society's Transactions for 1868, Dr. Tilbury Fox has described and figured a disease resembling severe lichen pilaris; that is to say, palish or reddish pimples seated at the hair follicles; but in its severity is a deeper affection of the follicles; in *the fact of its being congenital*, in its general distribution in severe cases more or less over the body, and in its obstinacy to treatment, it is peculiar. It affects by preference the outer aspect of the arms above the elbow (producing there an appearance like a nutmeg-grater), but also the thighs, the trunk, and the sides of the face and forehead. The follicles are plugged by scales or exuviae, which can only be detached with difficulty; the hairs are lost, or of the feeblest growth. The interfollicular portions of the skin are healthy. The disease is stated to occur in members of families where *ichthyosis* is common, and we have found this to be the case. The disease might well be regarded as a *xeroderma* of the follicles. The treatment consists in giving alkaline baths and rubbing simple oils or greasy substances into the skin, and exhibiting tonics internally, especially cod-liver oil.

Cancer, *see* Epithelioma and Rodent Ulcer.

Carbuncles, *see* Anthrax.

Chloasma, *see* Tinea versicolor.

Comedones are the small black-topped sebaceous plugs, or accumulations of sebum, that are found in the early stage of *acne punctata*. Each separate, little black plug is called a *Comedo*.

Treatment.—Writers recommend that comedones should be removed by *free* friction with or without some alkaline soap, and some have advised *sand* to be used. There are cases where the face will tolerate this rough usage, but as the rule in English practice only harm results therefrom. It must be recollected that the sebum plug tends to induce irritation, which is readily increased. We find it, on the whole, better in the bulk of cases to recommend the free use of hot water and the infriktion of a mild carbonate of soda, or borax ointment for some few nights, to be followed by a calamine lotion, or, if the skin is irritable, the use of borax or alkaline washes (19), (45), and subsequently, when the skin is less irritable, tar soap or soft soap inunction cautiously, to be followed by (14), to allay irritation. Finally, it may be advisable to stimulate the glands to healthy action by such remedies as (65), (67), or (73).

Condylomata, or “mucous tubercles,” are small tumors, generally sessile, with a circular outline and somewhat flattened top, occurring as a part of syphilis. They are usually palish, reddish, or brownish in color, and spring up on mucous or cutaneous, or more often on muco-cutaneous surfaces, and especially about the anus. They are contagious and liable to suppurate, and contain the peculiar syphilitic tissue in their bases. The treatment locally is to keep them con-

stantly clean and dry, and to apply astringents, or such mercurial preparations as blue ointment, calomel powder, or a lotion of bichloride of mercury (gr. i-ij to 3j of water).

Contagious Impetigo, *see* Impetigo contagiosa.

Dermatitis exfoliativa, *see* Pityriasis rubra.

Dysidrosis.—This affection is due to an inflammation of the sweat structures of the hands and feet, which was first described by Dr. Tilbury Fox in 1873, and is figured by him in his edition of Willan and Bateman's Atlas. The patient comes, as the rule, in severe cases, for advice with the hands held up to prevent their distension with blood, and wrapped up on account of their swollen, painful condition. This fact is an indication that the disease is clearly inflammatory and painful. Dysidrosis is characterized clinically at the outset by a certain amount of tumefaction and redness of the part affected, and the rapid development or distension of the sweat ducts, which look like small sago grains imbedded, and at first not rising above the level of the skin. The sites affected, and generally symmetrically, are the sides and palmar aspect of the fingers, the palms, and often similarly the feet. There may exist also at the same time *miliaria* of the general surface. Unless the attack is excessively mild the parts soon become decidedly reddened, tender, and swollen, and they itch and burn. As the collected fluid, which is at first acid as it issues from the patent orifices but rapidly becomes mixed with serum and alkaline, increases in amount, the vesicles get larger and project above the surface, and then become confluent, finally forming large bullæ-like collections of fluid. The cuticle macerates and peels off, exposing a reddened hyperæmic surface, which, however, *does not discharge like an eczema*. The disease tends to run a definite course of 10–20 days, but the hand

may remain considerably inflamed for some time. There is, however, a great tendency to the recurrence of the affection. It may occur in winter, but more frequently in summer, and it especially attacks weakly persons who are the subjects of nerve debility. It is rarely that the patient is found otherwise than with a pallid look, and complaining of weakness and debility.

Diagnosis.—The diseases which *dysidrosis* may be confounded with are *eczema* and *pemphigus*. It must be a very rare occurrence for eczema to be limited symmetrically to the hands (and feet), and especially to their palmar aspects. Moreover, dysidrosis lacks the prominent catarrhal features of eczema and the characteristic sero-purulent discharge. Pemphigus, with little or big bullæ, sometimes occurs limited, at any rate for a time, to the hands, but rarely, if ever, to the palms. The history of the evolution of the bullæ is quite different, the imbedded aspect of the vesicles in their early stage, which are seated at the sweat ducts, and the loculated appearance of the dysidrosis bulla are peculiar. It may be well to remind the reader that Mr. Hutchinson described in 1876 a neurotic, symmetrical, bullous disease of the hands and feet, commencing like dysidrosis, which Dr. Tilbury Fox recognized as an exaggerated example of the latter affection, but Mr. Hutchinson, Dr. Liveing, Dr. Robinson, of New York, and others, do not regard it as a disease of the sweat apparatus.

Anatomy.—Dr. Liveing regards dysidrosis as a “*local hyperidrosis*, consisting in an excessive secretion of perspiration, which, in consequence of its profusion and the congestion of the skin, which necessarily attends such an excessive secretion, does not entirely escape through the sweat ducts, but leads to a general maceration of the cuticle and to secondary eczema.” He adds, truly enough, that the sago-grain appearance of the vesicles might be presented by any little collection of fluid under such skin as exists on the

palms and soles. Dr. Robinson examined microscopically a case which he considered dysidrosis, and he could find no connection of the disease with the sweat ducts. Drs. Tilbury Fox and Crocker, however, in the last volume of the Clinical Society's Transactions have published an elaborate microscopic report upon portions of skin removed from a typical case in the earliest stage, and in which they thoroughly established the connection of the disease with the sweat glands, which had been concluded from clinical facts. They found all of the tissues very hyperæmic, the sweat glands and ducts especially so, and exhibiting signs of inflammatory irritation. In the rete were found the vesicles filled with inflammatory products. *They were in direct communication with the sweat ducts, and situated in the interpapillary portion.* Dr. Liveing had stated his view before he had had an opportunity of seeing these specimens, which were exhibited to the Pathological Society only recently.

Treatment.—At first diuretics should be given, especially in gouty subjects or those in whom the urine is loaded or scanty, and these remedies should be followed up by suitable tonics, especially quinine and iron. A cool regimen should be adopted, hot drinks avoided, or whatever will increase the perspiration. Locally, if the body generally be affected with *miliaria*, alkaline baths may be prescribed, but the chief thing to do is to soothe the inflamed parts at the outset by wrapping them in some bland or oily substance such as Caron oil, and to subsequently use a slight astringent, as (76). In some cases patients affected by dysidrosis are very weak, and in such the disease may lapse into a semi-chronic state, and then a long course of tonic treatment, consisting of quinine, mineral acids, and nux vomica, must be adopted.

Ecthyma.—This disease is characterized by the development of large isolated, *painful*, deep-seated pustules which have hard and inflamed bases. These pustules give

rise to unhealthy ulcerations of a greater or less degree, and the crusts that form are large, dark, and firmly adherent. This disease occurs mainly in the badly nourished and cachectic. It may be excited by local irritants; especially in children by acari and in elderly persons by pediculi. In fact, in the majority of cases ecthyma is a secondary occurrence, as in *scabies* or *phthiriasis*; nevertheless the pustules may be excited by scratching or irritants alone, and as a primary condition in the badly nourished. This is observed in those whose occupations subject them to the exposure to special irritants, such as the contact of lime to the skin. In syphilis ecthyma may occur, but here its pustules are associated with other well-marked syphilitic eruptions, whilst the surface is very dirty looking and ulcerates and scabs freely.

Treatment.—If the ecthyma is secondary to scabies or phthiriasis these diseases must first be treated in the usual way and then tonics may be administered subsequently, when the ecthyma will disappear. It may be necessary to apply locally (35) or (60) to heal the ulcerations. If the ecthyma be idiopathic it will probably be desirable to give aperients and rectify existing cachexia or debility by good food and tonics, such as (92), (95), (103), with or without cod-liver oil, applying the local remedies mentioned above. If there be marked ulceration the sores may be cleansed by two or three applications of iodide of starch (52) or iodoform, and subsequently dressed with (28) or (81).

Eczema is a simple inflammation of the skin characterized in a typical case by redness, which is quickly followed by vesiculation and sero-purulent discharge which stiffens linen, and dries into thin, yellow crusts; it is, in fact, a catarrhal inflammation of the skin. The disease begins by a serous effusion into the papillary layer, and the effused fluid finds its way into the rete, uplifts the cuticle slightly,

so as to form papules, but these rapidly pass on to vesiculation. The fluid then escapes free upon the surface, thus constituting the discharge which continues a greater or less time. Coincidentally with its escape, the fluid, which contains much fibrin, becomes more or less purulent, and there is a large amount of inflammatory cell-growth in the interstices of the stretched-out rete cells, and in the tissue of the papillary layer. If the disease becomes chronic, which is commonly the case, the cutis is altered by chronic inflammatory induration to a varying depth. Eczema, therefore, begins as a "serous catarrh," and is followed by suppuration and inflammatory infiltration into the skin. The disease is always attended by more or less itching.

Some think that eczema does not necessarily discharge. It is quite true that the disease, like all others, may be ill-developed or abortive, but it always *tends to*, and in its perfect condition does, "discharge." Considerable error, however, in this respect, arises also from the fact that many other diseases are constantly, and have been, included under the term eczema which are not eczema at all, such as parasitic eruptions, lichen, lichen ruber, erythema, and pityriasis rubra. These do not discharge, and hence the statement that eczema is not necessarily accompanied by discharge is to be ascribed *in part* to errors of diagnosis; but it is important to remember that in typical eczema there is always "sero-purulent" fluid effused externally.

Eczema attacks by preference the region of the junction of the skin and mucous membranes, the flexor aspects of the limbs or the parts where the skin is soft, the front of the trunk, especially in the region of folds of skin, and the scalp and ears.

Eczema is, perhaps, of all diseases of the skin, the one most prone to assume a variety of external aspects, mainly because it is made up of many stages—redness, papulation, vesiculation, pustulation, desquamation, etc.—and any one of

these may be specially marked, whilst they may exist in varying combinations because of the different ages of the diseased patches in different parts. But if the disease be regarded from a purely clinical point of view, it will be found that all cases of eczema may be ranged under one of three chief varieties, viz. : *Eczema simplex*; *E. rubrum*, or the inflammatory; and *E. pustulosum*, or the pustular or impetiginous form. In all its forms it is usually symmetrical.

(1) *Eczema simplex* includes those phases which are more or less localized and affects one or two places at the most; the diseased surface consisting of crowded vesicles seated on a red base, which on rupturing give place to a red discharging surface and subsequently a crusted patch. Eczema simplex is not attended by any marked general disturbance of the system, though perhaps by debility, and it is frequently excited by local irritants, such as heat, cold, scratching, irritant dyes, etc.

(2) *E. rubrum*, which is the inflammatory form, is attended by more or less constitutional disturbance, or by gouty or dyspeptic symptoms. In this form the local inflammatory signs are very marked, that is to say, the parts are hot, swollen, tender, itchy, excoriated, and they discharge and crust. This eruption often attacks the flexures of the joints, especially at the bend of the elbows, behind the knees, the axillæ, and the bend of the thigh. It is frequently seen in young children about the head, and limbs, and loins, but it is equally common in the adult, especially such as are of good age. In younger people it may have existed off and on since infancy, especially about the flexures, and in subjects whose parents have been gouty.

(3) *E. impetiginodes* or *pustulosum* is characterized especially by the early formation of pus, marked discharge, and free yellow crusting. It is mostly observed in strumous subjects, especially in children who are badly nourished and

the victims of home neglect. *Pustular eczema* is commonly seen about the head of the young.

The formation of the three above described varieties is based upon a consideration of the local and general phenomena of cases of eczema considered as a whole, and not upon the predominance of any one particular feature, and it is important to add, as before indicated, that each of these varieties has similar inflammation stages, and these stages are often considered as constituting varieties of eczema; hence the terms *eczema erythematodes*, *papulosum*, *vesiculosum*, *icherosum*, *madidans*, *squamosum*, etc. The reader will not fail to see that these terms do not signify true varieties, but merely the particular *stage* at which a given case or patch has arrived; hence the simple, the inflammatory, or the pustular varieties of the disease each has its erythematous, papular, vesicular, weeping, crusting stages, and so forth. The term *simple*, as applied to the disease, indicates not only that the local phenomena are slightly marked and localized, but the general disturbance is not severe, and that the disease runs a mild general course. The term *rubrum* implies a severer development of both local and general phenomena, and a longer and more tedious course and more troublesome sequelæ; and the designation *pustulosum*, a peculiarity in the local secretion which is dependent upon a special pyogenic dyscrasia; in other words, these three appellations deal with the total phenomena of particular sets of cases into which eczemata are clinically divisible, and that in a satisfactory manner.

There are other terms applied to particular phases of eczema, but they are unnecessary encumbrances to the subject; of an eczema, for instance, crack, which is sometimes termed *eczema fissum*, or *vimosum*; if it be attended by warty excrescences, *E. verrucosum*, etc. *

Local Varieties of Eczema.—It is customary in systematic works to call attention to the peculiarities of eczema as it

attacks particular regions of the body, and local varieties are described in accordance with the locality attacked, and stress is laid upon eczema of the head, ears, genital parts, hands, and feet. A few words in explanation of these "varieties" will be useful. Now, clinically, it must be understood that the eczema in these "local" aspects is not so much completely limited to the affected region as that it is signally in them; for eczema, though it *may* affect the ear or the head or other part only, is seldom limited to any one region, except in the commencement of an attack, *i. e.*, before sufficient time has elapsed for it to spread widely; or, in simple cases, excited by local irritants. As a rule, in fact, in the "local varieties," one particular region is prominently implicated, but others are also more or less involved, though in some cases in a slight degree. This fact must not be forgotten in reference to the following descriptions of "local varieties."

E. capitis occurs usually under two main sets of circumstances, *viz.*, in the young of lymphatic temperament, when it assumes the form of *E. rubrum* or *pustulosum*, and in elderly people of gouty tendency and associated with the same disease about the ears, and the hands and face perhaps. When the child is attacked it will be found to be more or less debilitated from having been imperfectly or improperly fed; and to be the subject of pale stools, indicative of imperfect liver action. The scalp and face swell greatly, ooze freely, and crust, while the glands in the neck are enlarged and painful. In the case of the adult, *E. capitis* is in our estimation an indicative in the majority of cases of a gouty tendency, in connection with more or less debility. It is often very itchy, and the scaliness is marked. I have noticed in elderly people that eczema of the scalp and legs is followed by a warty thickening of the skin, the little scattered spots or patches, varying in size and elevation from a split pea to a large almond and more. The spots are firm,

coarse, and feel harsh. They need caustics, or painting with tar or chromic acid solution, for their removal.

E. mammae is often associated with scabies in the female. When eczema attacks the *submammary* folds it is only a part as the rôle of a more general distribution of the disease, which likewise attacks the pubic region, the bend of the thigh, *i. e.*, the groin, the perineum, and the anal region, or, as it is termed, *eczema genitale*. This eczema of opposing parts takes the aspect of *E. rubrum*. The eruption is often extensive, painful, itchy, and is attended by much excoriation, swelling, and free oozing, whilst an offensive odor is exhaled at times. The disease runs a very chronic course, and greatly distresses the patient. Good observers have affirmed that glycosuria is common in connection with eczema, and irritation of the vulva and parts around, but in our experience, although this is often the case, the connection is not very frequent. We inclined rather to the view that a gouty tendency is more usually present. Glycosuria is of course observed in connection with many forms of skin eruption, as psoriasis and eczema, and it is always a cause of aggravation, but we do not believe that it can be looked upon as the cause in many cases of *eczema genitalium*.

Eczema of the axillæ is common under similar conditions, but in our experience is an indication of general debility, and especially so when it is attended by suppuration of the axillary glands.

E. aurum (or of the ears) is common in elderly people of gouty disposition. One or both, the inside or the outside, or all the surface of the ears, may be affected. The ear often swells very considerably, and, if the disease become chronic, may remain greatly enlarged for some time.

E. manuum is usually symmetrical; it may be a part of general eczema when it exhibits the typical characters of that disease, or it exists with little eczema of other regions, when it frequently assumes a dry aspect, and simulates

psoriasis. It attacks the palms, the fingers, perhaps the wrists or the back of the hand together, and the nails may also be implicated. It leads to considerable cracking about, and subsequent pain, of the fingers.

E. pedum is likewise a part of general eczema, or it may exist especially about and between the toes in an isolated manner, and we are convinced that this is common in gouty subjects, though they may be also debilitated. The swelling of the toes may be very great, the pain, the smarting, and particularly the itching intense; the surface, especially where the toes come into contact, inflamed and raw, whilst the cuticle becomes macerated by the fluid which collects in the interdigital parts. The foot sometimes swells considerably across the bases of the toes on both the flexor and extensor surface.

Before passing to the subject of treatment, we venture to add that all these several manifestations and varieties of eczema now described are greatly modified by the constitutional tendency of the individual. Eczema in a nervo-bilious subject will tend to be specially irritable; in a gouty one, inflammatory; and in a scrofulous one, to be speedily and freely pustular.

Diagnosis.—Eczema may be readily confounded by the student with psoriasis, lichen planus, pityriasis rubra, erysipelas (in the case of the face) pemphigus foliaceus, dysidrosis (in the case of the hand), scabies, and seborrhœa. Eczema, in its dry scaly stage, simulates psoriasis, but it lacks the white, silvery, abundant scales, the bleeding corium on removal of the scales, the predilection for the elbow and knee regions of the latter, whilst it possesses a history of an antecedent moist stage, it attacks the flexor aspect of the limbs, it is very itchy, its scales are the product of dried discharge, in great measure, and not solely epithelial.

Lichen planus and ruber always presents characteristic flat topped shining papules on some part of the surface.

Pityriasis rubra is the only disease that rapidly involves the whole surface of the body, and sheds abundant scales without there being any discharge ; it thus lacks the essential feature of eczema. Acute eczema of the face, when accompanied by much swelling, may simulate erysipelas, but the general symptoms are comparatively slight, and the eczematous character of the eruption will certainly be detected toward the outside of the eruptive patches or area or beyond it ; whilst the peculiar shining and glossy, smarting surface of erysipelas will be absent, and the "discharge feature" of eczema soon be apparent, a day or so will clear the diagnosis up. *Pemphigus foliaceus* in its later stages closely simulates eczema, but the origin of the disease from distinct bullæ, and their clear recognition up to the date of the close aggregation of the bullæ, the presence of abortive bullæ, the peculiar flakiness of the surface, the flakes, like bits of pie crust, answering in shape and size to the antecedent abortive bullæ, the peculiar sickening odor, and the general emaciation and weakness of the patient, and the want of dermic infiltration are not like the phenomena of eczema. The diagnosis of eczema from dysidrosis is given under the description of the latter. Scabies ought to be recognized when it is an exciting cause of eczema by the characteristic appearances incidental to the presence of cuniculi about the hands and the genital parts. Seborrhœa does not discharge, but consists of greasy, flat, readily removable scales.

Eczema manuum is not unfrequently mistaken for palmar psoriasis, and *vice versa*, but in a large number of cases typical eczema will be found elsewhere in cases where the hand is the seat of eczema, whilst if it be confined to the head it will be found to have "wept" at some period, and the scaliness that exists will not be essentially epithelial, as in psoriasis, but made up in great measure of inflammatory material.

Treatment.—It is of great consequence in the treatment

of eczema whether the subject be a private and well-to-do patient, or a needy one attending a hospital or dispensary ; for the simple reason that the latter is unable to give that amount of rest and attention, more especially to the local treatment, which is so conducive to the amelioration of the disease. The hospital patient, of course, is mostly compelled to follow his usual avocation, which not only interferes with his using his remedies properly, but often exposes him at the same time to many sources of additional local irritation, such as the contact of dirt, acrid substances, and muscular exertion attendant upon the exercise of his calling. The hospital out-patient cannot, moreover, regulate his living as he ought.

In *E. simplex* all causes of local irritation are to be removed, and the part protected locally by dusting it over with such as (48 or 49), or (14) may be applied. This should be followed up by (76). A very good ointment for these cases is the boracic acid ointment made after Lister's formula, but carefully prepared so as to be free from grit. Internally, a mild aperient, salines, if needed, for a day or two, to be followed by quinine and iron (109) will be beneficial, since the outbreak or its persistence is very often favored by debility.

E. rubrum requires more active treatment. Any gouty tendency must be carefully met by appropriate dietetic and medicinal remedies, all stimulants being at first avoided. The part locally is to be soothed by absorbent powders, or bathing with poppy water, and subsequently dressed with linimentum calcis, or should there be much burning (18), (41), or (74). Sometimes, indeed, all the remedies will fail until a loaded system has been relieved by aperients with small doses of colchicum, or excess of acid generated in the system be corrected, or dyspepsia remedied. In all cases of eczema with much pain or redness, aperients are of greatest value, and should be used freely. When the part affected

n eczema rubrum is less irritable and red, (62) or (76) may be employed with tonics, especially arsenic, with alkalies, iron, or quinine (90), (107), (108). If the part become chronically thickened and indolent, an alterative mercurial course with bark will be found beneficial, at the same time that tar and weak mercurial ointments are applied (60), to be followed in the still more chronic cases by blistering, if need be.

E. impetiginodes requires the internal free and continuous use of cod-liver oil, iron, and quinine, with suitable food, and locally the application at the outset of simple oil, to free the part from crusts, followed by the linimentum calcis, and then a weak white precipitate ointment, as, for instance, gr. iij to the ʒj or (62).

In regard to *local* varieties, before described, some few remarks may be made. In *E. capitis*, which is almost synonymous with *E. infantile*, the child will be found pale, and very likely more or less cachectic. Bad or insufficient food is the cause of the majority of such cases, and the remedies chiefly required are better food, cod-liver oil, arsenic, and steel wine; but due attention should be given in the first instance to the torpid action of the liver, which is so often found to be indicated by pale putty-like stools. Cleanliness and the use locally of the remedies stated to be appropriate for *E. impetiginodes* are to be employed; for, as a matter of fact, *E. infantile* and *E. capitis* take on the characters for the most part of that variety, though occasionally those of *E. rubrum*. Should there be any difficulty in removing the crusts, the affected part may be kept soaked in oil until they are loosened and detached, when a weak white precipitate or nitrate of mercury ointment may be used with advantage. In the adult, *E. capitis* occurs in the gouty, and requires similar treatment to *E. rubrum*, locally at the outset, if there be much oozing or inflammation an ointment made by rubbing together a drachm of liquor plumbi and an

ounce or more of vaseline does good and soothes, but in chronic conditions nothing is better than one composed of five grains of the white precipitate, a like amount of nitric oxide of mercury finely levigated, and an ounce of fresh lard, applied night and morning to the scalp or the affected parts.

E. mamma, if excited by scabies, disappears in the cure of that malady.

E. manuum and *E. pedum* are examples of *E. rubrum*. If the former is often excited by flour, as in bakers, by sugar, as in grocers, and by soda, as in washerwomen, the sources of irritation must be removed. The external treatment consists, in simple cases, of tonics with some slight alkali in them.

In the case of the toes being attacked, small doses of colchicum with alkalies, iron, and arsenic do most good in our experience. Locally very marked inflammation must be soothed by soaking freely in linimentum calcis at night, and use No. 74 (without the mercurial preparation) in the daytime, adding to it so soon as the parts will bear stimulation some tar preparation; that known as the Wright's liq. carbonis detergens in the proportion of two drachms to six ounces of the before-quoted lotion. No. 74 is as good as any. In some cases of indolent disease India-rubber gloves worn at night are effective. In eczema of the legs, if there be much œdematous infiltration, the liberal exhibition of diuretics in conjunction with rest, careful bandaging, and the use of (76) or a weak mercurial ointment, is all that is needed to effect a cure; though often tonics and good feeding are very useful adjuncts.

Elephantiasis.—The term Elephantiasis has been long used as a generic one for two distinct diseases, but these bear no real relation to each other. The one is *Elephantiasis Arabum*, or the elephant leg; the other the *Elephantiasis*

Græcorum, or the true leprosy, which we shall describe now under separate headings, taking *E. arabum* first. [A third form, *Elephantiasis telangiectodes*, having peculiar features, will be subsequently considered.]

Elephantiasis Arabum.—This disease is also known as Tropical big leg, Barbadoes leg, Elephant leg, Pachydermia, Bucnemia tropica, and Spargosis. It is characterized by an hypertrophy of the skin and subcutaneous tissue, leading to great deformity and enlargement of the limb, with thickening, induration, and fissuring of the integuments, and more or less papillomatous or warty growth of the skin. It is ushered in and attended throughout its course by recurrent attacks of febrile disturbance of greater or less severity, and by lymphatic and glandular inflammation and its consequences. Though isolated cases occur all over the world, here and there, the malady is essentially an endemic disease of tropical parts. It attacks males by preference to females in the proportion of about five to two. The poor and ill-fed are much more prone to it than the well-to-do; and agriculturists and those who are exposed to the sun, in damp and humid regions, are more peculiarly liable to be attacked by it. As regards the age of individuals affected by elephant or tropical big leg, it may be said with pretty tolerable certainty that the disease is rarely found in persons of less than fifteen years of age, whilst it occurs most commonly in those between the ages of fifteen and forty. The leg is the part generally attacked, and indeed in more than 90 per cent. of all cases, though the joints, the scrotum, the arms, and the face suffer occasionally. The average size of the normal leg at its biggest part is said upon good authority to be about fifteen inches in circumference, but the limb may be increased to be as much (according to Mr. Vincent Richards) as thirty-six inches round.

In some cases several members of the same family may be attacked, which fact may be explained either by regarding the affection as hereditary, or on the score that they are all subjected to similar influences. The affection is usually of very chronic production, and when the enlargement has once taken place, it is permanent. The swelling accompanying each recurrent erysipelatoid attack remains after the subsidence of the fever, and so the limb gradually enlarges. The affection is not often fatal, but patients die from intercurrent diseases, or exhaustion from secondary causes.

The relationship between the enlargement of the limb, the fever, and the lymphatic inflammation is, in an etiological point of view, not well defined. It is usually taught that the disease and its exacerbations are ushered in by distinct attacks of "fever" of some few days' duration, and to which the term "elephantoid fever" has been given by Sir Joseph Fayrer; and that coincidently or immediately following as a consequence, redness, pain, and tension, and perhaps knot-tiness, are noticed over the course of the lymphatics of the limb, which become enlarged and otherwise diseased. But there are many exceptions to this sequence of events.

A good deal of information has recently been collected upon this particular point,¹ and it is certain—first, that the disease may come on insensibly, and develop gradually, without any febrile disturbance at all, as in twenty-two out of 636 cases collected by Mr. Richards, of Balasore, and twenty-six out of eighty-seven cases tabulated by Sheriff Mooden Khan Bahadur (Triplicane, Madras), and in some cases without any lymphatic inflammation; secondly, that in a large number of instances, local attacks of inflammation of the limb or lymphatics are preceded or ushered in by febrile attacks lasting from two to three days; thirdly, that the two

¹ "Endemic Skin and other Diseases of Hot Climates," by Drs. Farquhar and Tilbury Fox, 1876. Churchill.

conditions may be coincident ; and, fourthly, that the febrile paroxysms are frequently secondary to glandular inflammation.

The tendency of modern writers is to regard the disease as essentially the result of lymphatic inflammation and obstruction, the febrile attacks being due to the lymphatic mischief. As regards the cause of the lymphatic disease, two main theories are in favor: one which attributes it to an altered blood-state, induced by climatic influences, and in connection with which exposure to cold and damp operates as a speedy excitant of lymphangitis; the other is the presence of filariæ in or about the lymphatics. The latter explanation as the cause of common uncomplicated elephantiasis, to our mind, cannot be entertained at present. The idea that filariæ are the cause of elephantiasis has arisen thus: filariæ have been found in the lymph and blood in cases of enlargement of the scrotum, with exudation of *chyle-like fluid* (chyloderma). They have also been detected in cases of elephantiasis in connection with this so-called "lymph-scrotum;" and it has been assumed that as filariæ cause the lymphatic varix in the one, it must do so in the other form of scrotal and in leg enlargement, in which chyloderma, or chyluria, is absent; but it is assumed that the two conditions—the chylous and non-chylous enlargements—are the same.

But facts at present seem to indicate that filariæ have not been found in uncomplicated elephantiasis—that is, in disease without chylous exudation; and secondly, that filariæ occur only in connection with chyluria (chylous abscess, as shown by Dr. Bancroft especially) and its associated condition, the escape of chyle from the skin, or chyloderma. Filariæ, therefore, are the cause of the conditions associated with chyluria and chyloderma, and not of elephantiasis; but the former may complicate the latter.

It must be allowed, also, that the fact that filariæ are often

found, and have existed some time, in the blood and urine of patients who exhibit no symptoms or signs of elephantiasis, is a strong argument against their presence being the real cause of the latter disease.¹ The concurrence of filarious blood (filarious abscess) and elephantiasis, in the same subject is not surprising when it is recollected that these things are co-endemic and common in the regions where they are chiefly observed; and what, therefore, at first sight seem to be cause and effect *may* after all be best explained—seeing that there is no necessary connection between the two—as a concomitance. It has yet to be proved that “true lymph-scrotum” (varix lymphaticus), and true elephantiasis are identical diseases.

In England we occasionally observe a condition answering in all its naked-eye characters to elephantiasis of the limb, in patients who have never been out of England, as secondary to eczema; and it would seem that the disease is to be explained as an hypertrophy of the whole textures, the immediate consequence of long-continued hyperæmia. But as we frequently notice long-continued hyperæmia without much hypertrophy of the leg-tissues, it is but fair to assume that where elephantiasis does occur there must exist some special proclivity on the part of the tissues to take on, under favorable circumstances, a hyperplasic increase; so that it can scarcely be said that the hyperæmia is the true cause of the elephantiasis.

Anatomy.—When the tissues are cut into with a knife, they are found to be very firm, and sometimes almost like gristle, both in consistency and appearance. Microscopic examination shows great papillary hypertrophy, varying in degree in different situations, with consequent heaping on of the epithelium and enormous overgrowth, and dense felting together of the corium, and especially the subcutaneous con-

¹ Dr. Manson, of Amoy, in the Chinese Customs Gazette.

nective tissues. The bloodvessels are enlarged and gorged with blood. The condition of the lymphatics is very important. The vessels are much dilated, and the "juice tracks" around the bloodvessels attain a great development, and show prominently as large tracks of adenoid tissue under the microscope. The neurilemma of the nerves is often greatly thickened. As secondary changes at an advanced stage of the disease the fat and muscles are found atrophied, and the bones may be thickened in various ways.

Diagnosis.—There can be but little difficulty about the diagnosis of the affection, but true *E. Arabum* must not be confounded with the hypertrophic conditions induced by prolonged *eczema*, or other irritation. It seems probable, too, as shown above, that true *E. Arabum* differs from the closely similar conditions induced by the escape of chyle in the skin (*Chyloderma*). Lastly, there are rare hypertrophic conditions, mostly congenital, accompanied by overgrowth or dilatation of the blood and lymph vessels, called *E. teleangiectodes*,¹ which bear no real relation with this disease.

In all cases it is essential that patients attacked by elephantiasis Arabum should be moved away from the endemic haunts of the malady, to a healthy, elevated, and bracing locality. This, in itself, is often of great benefit. In addition, and as a matter of course, the general health should, if it need, be improved by proper medicinal and hygienic treatment. Much has been said of late in India in favor of a purely milk diet in the treatment of the disease. Of this we know nothing personally, but have seen much benefit from the free exhibition of quinine. It lessens the severity and frequency of the "febrile paroxysms," and so indirectly tends to repress the disease. But, in fact, no internal medicines can be depended upon to exert any direct and specific

¹ Hebra on Diseases of the Skin and Busey on Lymph Channels. 1878.

influence upon the disease. During the febrile paroxysms, salines, with aconite and quinine, are the proper remedies, with opiates to relieve pain. The local treatment is very important, and comprises rest, frictions, inunctions, bandaging, prolonged pressure, arterial compression, and ligature of the main arterial or nerve trunk supplying the affected part. In the lesser marked cases, absolute rest, with frictions with mercurial or camphor or iodine liniment, and careful prolonged bandaging, have been followed by favorable results. Should these means fail, or should the case be one of long standing or of great severity, it becomes a matter of consideration whether some more serious measures should not be adopted. If large intractable ulceration exists, the limb may be amputated.

Prolonged compression of the main artery (digitally or otherwise) has been practised by Dufour, Vanzetti, Hill and Cockle, Gosselin, Bardeleben, and others, with varying success; but it is worthy of trial. As regards ligature of the main artery there is a difference of opinion, owing to the tables compiled by various authors not giving properly the subsequent history of the case. We have before us a table collating thirty-seven cases in which this operation has been performed. In almost all there was temporary amelioration, in many no subsequent history is given, but where this was recorded there was almost always a relapse. Butcher's was the *one* really successful case, the patient being well four and a half years afterwards. On the whole, the operation is very unsuccessful. [Dr. Thos. G. Morton, of Philadelphia, in 1877, excised about two inches of the sciatic nerve in a case of *elephantiasis* at the Pennsylvania Hospital, with apparently satisfactory results. The patient subsequently contracted pneumonia, and died within a year with *phthisis*. His leg greatly diminished in bulk after the operation, and never regained its former size, before the operation, but his extended stay in bed may have aided this result, as well as

the general wasting that occurred in all the tissues during his prolonged sickness.]

Elephantiasis Græcorum.—This, the true leprosy, consists in a profound alteration of the nutrition of the body as a whole, the consequence of the operation upon the system of special climatic influence or an hereditary tendency to the disease. This evinces itself by the formation of a new growth possessing the physical characters of granulation tissue. The disease develops itself chiefly in the skin, the mucous surfaces, and the nerve trunks; giving rise to thickening and deformity, especially of the face, together with ulceration from degeneration of the leprous tissue itself, and to various symptoms of disordered sensibility, particularly *anæsthesia*, and to eruptive lesions in the skin, which are the direct result of the invasion of the nerve trunk by the same nerve tissue. There are two chief sets of leprosy cases, the one in which the deposit of new leprous material in the skin is marked, and the *anæsthesia* is only moderate in degree, and the other in which the nerve tissues are specially involved, *anæsthesia* and *atrophous* changes being very decided, whilst the deposit of leprous tissue is comparatively slight, but there is no sharp line of demarcation between the two forms, which we denominated respectively the *tubercular* and the *anæsthetic*. Clinically, the distinction of these two varieties is very convenient.

The tubercular form is known in its fully developed stage by three sets of symptoms, (*a*) discoloration of the skin, of a light coffee hue, often mistaken for syphilitic maculation; it may be preceded by slight redness, and it shows itself in a few spots first of all, and then in many places over the body and limbs; (*b*) deposit of a new growth in the skin in the form of dull red tubercles or infiltrations; this deposit is chiefly found about the face and ears, so that the eyebrows, cheeks, forehead, ears, nose and its alæ, become dull copper-

colored, coarse, uneven, and greatly distorted from the thickening, the countenance presenting a fierce or *leonine* appearance; it is also observed in the seats of discoloration; and (c) anæsthesia of different parts, especially parts of the extremities, and particularly some or all of the fingers or toes at the outset, due to the deposit about the superficial nerve trunks, of the same new growth as that which invades the skin. In the *anæsthetic* form the deposit in the skin is not so marked, but anæsthesia is well developed, and crops of bullæ (which leave behind atrophous spots), and another kind of eruption, consisting of more or less circular, well-defined, dull red, quasi-psoriatic but *anæsthetic*, circular spots of eruption are observed. These patches often appear about the hands in the early stage, then in various parts of the body and trunk, as dull red maculations in their early stage, but after a time they look like patches of fading psoriasis circinata, or seared skin, the central part being *apparently* slightly depressed and paler than the outer portion, which is more prominent, looks thickened, and is very slight scaly, the whole patch, however, being *anæsthetic*. Such patches are, as the disease progresses, scattered about the body, more or less symmetrically. The hands often get distorted, and the fingers contracted, so that the hand assumes a claw-like aspect. The cutaneous tissue itself becomes lax, dark colored, dry, and fits loosely in wrinkles over the bones.

Diagnosis.—It is almost impossible to confound leprosy with any other disease, if attention be paid to the presence of anæsthesia, in the eruption patches and the extremities.

Treatment.—Much has been said of late about reputed “cures” of leprosy and “specifics” for the disease, but they have proved fallacious. The disease may, however, be greatly ameliorated by the use mainly of external remedies, but there is no known cure for leprosy. In dealing with lepers the first thing to be done is to remove them out of the

reach of all unhealthy conditions. They should, if in them, be taken from localities where leprosy is endemic, and sent to a temperate and bracing climate. Next, they should always be placed under favorable hygienic conditions, be provided with a liberal supply of fresh animal and vegetable food, be properly clad, housed, and tended, take due exercise, and indulge in frequent proper ablution. It is necessary too for the leper to have his mind actively and healthily occupied by engaging him with proper employment. A general tonic treatment should be carried out by the mineral acids, ferruginous preparations, bitters, and especially by large doses of quinine, from which we have obtained very favorable results. A word may be added here with regard to the treatment by the Cashew and Gurgun oils, for which great results are claimed. These oils may be administered internally, and they are recommended to be rubbed into the patches and tubercles of leprosy freely and persistently. They certainly have the effect of removing the tubercles in a great measure, but only temporarily, and the diseased constitutional state is not cured.

Elephantiasis Telangiectodes.—Virchow has described under this term, and Hebra and Kaposi under that of *Lymphangiectodes*, a form of congenital hypertrophy occurring principally in acephalous and other monsters, which in these involves frequently the whole body, but in viable individuals only invades one or more localities. In this disease, primarily and chiefly, the cellular tissue is involved; it becomes so hyperplastic that “elephantoid” enlargements occur. Generally the whole limb is affected, but the condition may be quite localized. The tissues depend in great folds or rolls and the outgrowth contains many bloodvessels. In one case the growth may be chiefly *lipomatous*, at another vascular or *nævoid*, at another the *lymphatics*, may be particularly abundant and enlarged, and in rare instances they may be

varicose and even burst and give exit to lymph ; but these cases are not common and can scarcely be discussed in this work.

Epithelioma, or Epithelial Cancer, in its typical form, and in which it runs a rapid course with free ulceration, gland implication, and the like, occurs in elderly persons, and attacks by preference the lower lip. It begins by a "crack" that gradually hardens at its base, or as a *hard* lump often where the lip has been irritated by friction with the pipe in habitual smokers, and the presence of this little lump makes the lip feel swollen and "pouty." This lump soon cracks in the centre from the setting in of ulceration ; and when this takes place the progress of the disease is often very rapid. The ulcer, which is now soon produced, is foul, and its edges are *everted, indurated, and undermined*. The glands under the jaw become enlarged and indurated, and then the disease makes rapid progress and carries off the patient.

Treatment.—There is only one thing to be done in epithelial cancer, and that is to remove the disease in as early a stage as possible and as freely as circumstances will admit. The form of epithelial cancer termed "Rodent ulcer" will be described for convenience sake under that heading. Certainly the two are phases of the same disease.

Erythema is simply redness or hyperæmia, and this has already been described under the head of Elementary Lesions. Redness of course may form a part of very many dissimilar diseases, all those, in fact, in which inflammation or active congestion occurs, but then it plays only a subsidiary rôle in these maladies. Reference is here particularly made to erythemata, which in themselves constitute the condition or disease requiring treatment.

The true *erythemata* may be divided into two main groups :

The *first* group of erythema cases includes all those instances of hyperæmia which are excited by local irritants of various kinds, as parasites, heat, cold, friction, scratching, flannel, etc., and also comprises such erythemas as are induced by the rubbing together of two folds of skin, and are accompanied by a muciform discharge, and to which the term *intertrigo* is applied.

The treatment of this set of cases is simple. It consists in removing all local causes of irritation, and simply soothing the part by such remedies as (13), (14), (36), (74), followed by (10), (39), or (72). In intertrigo (48) and (49) are specially useful ; and in some cases it is necessary to give children tonics, particularly steel wine and cod-liver oil. In the intertrigo of old and fat people diuretics and alkalies, followed by tonics and dressing the parts continuously with (13) or (76), constitute a good mode of treatment.

The *second* group of cases includes the erythemata connected with generally slight, very rarely decided, systemic disturbance, and often with a rheumatic diathesis. There is rather more swelling than in the slighter forms, and a decided amount of effusion, so that whilst the erythema may spread in circles or in general well-defined areas, the disease is attended by papulation or the formation of irregular, and sometimes large nodular swellings ; hence the terms *E. circinatum*, *E. marginatum*, *E. papulatum*, *E. tuberculatum*, and *E. nodosum*, etc.

The particular aspect of the erythema in a given case varies considerably, according to the amount and particular extent of the effusion and the redness, and in some cases the varieties portray each their characters ascribed to them ; but in a large number of cases, on the other hand, several or even all the aspects of the above-named varieties may coexist in the same patient. Hebra has indeed discarded the use of the terms indicative of these varieties, and employs that of

E. multiforme as an inclusive one, on the ground that all the so-called varieties "are merely forms of the same disease in different stages, the appearance varying according as the affection is undergoing development or is in a later period of its course, or subsiding." This is not quite a correct representation of clinical facts. The truth is as above stated. A few words may be added to complete the description of the different phases of the erythemata. These eruptions are symmetrical and attack by preference the backs of the hands and fingers, the forearms, the legs, and the feet on their dorsal aspects, and the face and sides of the neck. The trunk generally escapes. When the eruption is made up of rings it is termed *E. circinatum*. The rings vary in size from a sixpenny piece to that of half a crown or so. This phase often attacks the neck and forehead, though it is mixed with other forms of erythema. If several circles coalesce, so that serpentine lines or bands are produced by the blending of the separate segments of circles, a *gyrate* aspect is presented, and the eruption is termed *E. gyratum*. Rarely a series of concentric lines of erythema of different lines are present, and this is termed *E. iris*. The most common form is that of Erythema *papulatum* and *E. tuberculatum* combined. The rash, which predominates, is made up of soft, red, slightly raised, and infiltrated papules and tubercles, varying in size from that of sixpence to a shilling, dotted over a general red blush, which soon assumes a bluish color, and fades away like a bruise. A little itching, or tingling, is present. Each spot runs its course in a few days, but the disease is prolonged by successive crops for two or three weeks, perhaps. Sometimes the tissues are much swollen; they may be even livid from the occurrence of decided œdema, and more or less extravasation of blood, or escape of its coloring matter, into the parts, which may look just as though they were in a state of impending gangrene; hence the terms *E. œde-*

matosum and *E. hæmorrhagicum*. These may concur with *E. circinatum* and *marginatum* of the neck and face.

The *diagnosis* is easy. The symmetrical distribution of the rash, its seat at the back of the hand and forearm, the absence of itching of marked amount, the simple hyperæmic character and bluish tint of the rash, and its acute occurrence with insignificant constitutional disturbance, are very significant of the nature of the eruption.

E. nodosum generally occurs as a distinct phase of erythema, but not always; it may be a part only of an *E. multifforme*. In this variety there is often decided malaise, and perhaps pyrexia, with pains in the limbs, followed by the eruption, which is mostly confined to the lower extremities, and consists of round, but generally oval, roseolous-looking spots, varying in area from the size of a sixpence up to two or three inches long by one or more wide, having their long axis parallel to that of the leg, and which soon become elevated and tumid, tender, quasi-boggy in feel, and change color to that of a bluish tint, especially at their circumference. They fade away in color like bruises. The forearms may be attacked, and this lasts a week or ten days, but the existence of the disease is prolonged by successive crops of these nodular, hyperæmic elevations. It is a symmetrical eruption, more frequent in females than males, and mostly in adolescents. It is often a painful disease, and the individual places are always very tender. The separate spots are thought to arise from embolisms in the small vessels.

The *treatment* of the members of this second group in the slighter forms consists in giving mild, aperient salines, followed by quinine, whilst locally some simple astringent wash, such as (74) or (19), may be applied. In the severer cases it may be necessary to relieve a loaded state of system by (95) or (96), before giving quinine, and locally to use similar measures as in the less severe forms, or apply powders, such as (48) or (49). In *erythema nodosum* rest

in the recumbent position is of prime importance, especially where the legs are painful.

Favus, *see* *Tinea favosa*.

Fibroma, or **Molluscum Fibrosum**, is characterized by the occurrence of projections on the surface of the skin of outgrowths from the connective tissue of the deeper layers of the cutis. As the little tumors go on growing, they become pedunculated. A single tumor may be met with, and then it may attain a great size, or the whole body may be covered with comparatively little ones. They are met with in both sexes and in all countries, but the subjects of them are persons who exhibit a certain degree of imperfect development generally. The connective tissue of which they are composed varies in density of arrangement and in the proportion of cells intermingled with the fibres. The tumors are painless as a rule, but in our experience show sometimes a disposition to ulcerate or throw off exuberant ulcerations. Fibromata are not common, and when met with must be distinguished from warts, molluscum sebaceum, and fatty tumors.

Treatment.—If it be important that the tumors should be got rid of, they may be removed by the ligature or the knife. They cannot be enucleated.

Filaria Loa, and **Medinensis**, *see* Guinea-worm disease.

Fish-Skin Disease, *see* *Ichthyosis*.

Follicular Hyperæmia is a common accompaniment of many diseases, and particularly of those attended by pruritus, for in these it is readily excited by scratching, as in scabies, eczema, and phthiriasis. It gives rise to red papules,

which are seen to be seated at the hair follicles in part, and partly to be hyperæmic papillæ. This condition is erroneously styled lichen. Hyperæmia of the follicles demands soothing remedies.

There is, further, a condition of follicular hyperæmia met with in adults, though but rarely. In this eruption the surface is *uniformly* dotted over with red points, every follicle being affected, but the papules are not very prominent, and have no central plug. They are almost completely removable by pressure. The skin of the trunk, and arms, and thighs are usually particularly affected. The disease is chronic, itchy, very obstinate, and occurs in debilitated persons who have been a good deal worried and subjected to anxiety. The disease seems due to vaso-motor disturbances of the follicles, and more nearly allied to lichen ruber perhaps than any other disease.

Fungi.—For the names of the several fungi causing parasitic diseases, *see* Tinea.

Furunculus.—It is scarcely necessary that “boils” should be discussed in any considerable detail in this place. They are usually described as rounded, painful, circumscribed inflammations of the skin, involving the connective tissue, and therefore more or less deeply seated, with hard, indurated, and inflamed bases. Slow suppuration goes on, and the central portion sloughs out, and constitutes what is called the “core.” In reality the anatomical seat of boils, in the majority of cases, is a hair follicle or the attached sebaceous gland, with more or less participation of the cellular tissue around. In some cases the follicular origin of boils cannot be made out, hence the division into *follicular* and *cellular tissue* boils. It is open to question whether the “core” be always an “exudation,” or a gland which has died in consequence of the inflammation. When a boil

forms, pain is first felt, and then a lump accompanied by tension and redness : this enlarges and suppurates. In "cellular tissue boils" gangrene may occur. These are found mostly on the scalp, neck, limbs, and especially the thighs of marasmic adults, and often children. Boils occur in those whose vitality is depressed by defective or depraved living, mal-hygiene, or exposure : also in those whose blood current is charged with nitrogenous waste products, and in diabetic patients. An exclusive meat diet, stale or unsound meat, over-fatigue and exercise are other excitants. Local irritants excite their formation, and they may accompany disease in which scratching is freely practised, as in scabies, prurigo, eczema, phthiriasis, etc. Boils may be epidemic, and then occur, oftentimes, when erysipelas is rife.

Treatment.—The formulæ useful for boils are specially (95), (96), (108), and the mineral acids, internally, and (35), (79), and glycerine of belladonna externally. Patients with boils should have a carefully regulated diet, and obtain fresh air by change to the seaside or of occupation. Fresh yeast taken in tablespoonful doses three times a day is often very efficacious. In very debilitated persons the free exhibition of red wine or porter may effect the dispersion of the furunculi. Some practitioners find great benefit from the use of carbolic acid, or acid nitrate of mercury, to the boils to absorb them.

Grocers' Itch is similar to Bakers' itch, except that it is caused by the irritant action of sugar.

Gutta Rosacea, *see* Acne rosacea.

Guinea-worm Disease.—This is very common in tropical climates. Usually what happens is this : the worm (*Filaria medinensis*), when quite small, bores its way into the skin, generally of one of the lower extremities, quite un-

noticed by the patient. It nestles in the connective tissue for several months, when it has attained a length of perhaps ten or twenty inches or more, and the size and aspect of a piece of flattened whip-cord, of moderate thickness. It now sets up more or less irritation, and at one point an abscess threatens to form, and generally a bleb forms, which bursts and leaves a livid looking surface the size of a half crown, in the centre of which an aperture appears, through which the worm emerges, sometimes wriggling about in lively fashion. The parts around are brawny and painful, and the patient is crippled for the time. If about an inch of the worm be *gently* pulled out each morning, and wound round a little piece of cardboard or a quill, the parasite can be completely removed in a few days, and the wound speedily heals afterwards. We have seen a worm twenty-three inches in length protrude one day an inch or two, and come away in a poultice applied the next night, in a patient to whom assa-fœtida had been liberally given for several days previously.

[On the *west* coast of Africa, at Congo and in the Gaboon region particularly, natives, and even white foreigners, are subject to the invasion of a small entozoa, called *Filaria loa* by Guyot, and *Dracunculus loa* by Cobbold, which most frequently makes its appearance under the conjunctiva, its advent causing inflammation and severe pain. It occasionally appears under the skin of the fingers and other parts of the body, but its favorite seat is the eye. For a fuller report see "The account of a Worm removed by a native Woman from beneath the Conjunctiva of the Eyeball of a Negress at Gaboon, West Africa, with a brief history of the parasite, and Prof. Leidy's description of the specimen, by Thomas G. Morton, Surgeon to Penna. Hospital,"—*American Journal of Medical Sciences*, vol. lxxiii. p. 113.]

Herpes is a disease which is characterized, so far as its eruption is concerned, by the development of one or more

groups of little bullæ, or large vesicles, upon an inflamed and somewhat raised base. This eruption in typical cases runs a short and acute course of about ten days. It is attended generally by slight pyrexia, and locally by heat, smarting, and a sense of tenseness in the affected part. The individual vesicles are chambered, and they are grouped closely together, but do not unite. They also do not burst as the rule, but their contents, at first transparent, become cloudy, and then dry up, giving place to light crusts, that fall off after a few days, leaving behind only slight reddish stains.

Herpes occurs under a variety of different conditions. It may exist as an independent disease, or develop in the course of other maladies, in which case it is said to be *symptomatic*. The latter aspect of the disease is exhibited by the herpetic patches that appear on the lip or face in connection with catarrh, pneumonia, and at the time of impending convalescence in fevers, when it may also show itself on the inside of the mouth and on the mucous surface of the throat.

In its simpler form, that is, when it occurs as an independent and the sole disorder, the eruption may be more or less general and symmetrical or localized.

It attacks, in preference, the lips, the face, and the prepuce, and the varieties termed *H. facialis*, *H. labialis* *H. preputialis* are accordingly made. But other varieties are recognized according to the appearance of the eruption. If it assume the ringed form it is termed *herpes circinatus*, an unnecessary designation. If it assume the form of a series of rings of vesicles, it is termed *H. iris*, and this is an important phase. It is apt also to attack different parts of the body, on one side only, and then it is made up of a series of groups of vesicles arranged in a band-like form, and this aspect receives the name of *H. zoster* or *Shingles*.

General Herpes is rare, but it may occur as an acute febrile condition, or come on more slowly, when it is chronic.

The herpetic patches are disposed symmetrically, especially over the back and sides of the trunk, and seem to follow the lines of distribution of the trunk of the cutaneous nerves. The acute form may last two or three weeks, or lapse into a chronic condition, in which solitary isolated vesiculations occur together with herpetic patches, the disease getting worse and better by fits and starts, and being attended by considerable irritation and disturbance of the general health.

Herpes Facialis and **Labialis** need not be described further.

Herpes Preputialis or **Progenitalis** attacks all parts of the penis, but especially the prepuce, in the male, and the vulva of the female. The herpetic patches in the skin of the penis run the usual course of herpes, but do not, when seated on the mucous membrane, present their vesicular aspect perfectly, and minute ulcerations soon take the place of vesicles; but there is an entire absence of any induration, and they speedily assume a healing aspect, and, indeed, heal quickly as the rule. It is excited chiefly by cold, by excess of acid in the urine in rheumatic subjects, by any special excitement of the genital organs, and is often periodic in its recurrence. We have seen it associated with herpes iris, and herpes facialis in the same subject.

Herpes Iris is a well-marked, distinct, and very definite disease, which was most fully and accurately described by Willan and Bateman; but of late it has become the fashion to rename it hydroa, especially in France, an error which is due to the fact that the English description of the disease has been overlooked. It is quite distinct from true *hydroa*.

Herpes iris attacks, by preference, the back of the hand and fingers. At first a circular spot, of somewhat dull red or purplish hue appears and vesiculates in the centre; but

the condition soon alters to one in which there is a ring of ill-developed vesicles at the circumference surrounding the central vesicle; the cuticle being more or less elevated according to the degree of effusion. Sometimes the central spot of the patch is slightly hemorrhagic. It is generally darker than the circumferential spots. The spots vary in size from that of a three-penny piece to a shilling or a little more. There may be one or a dozen or more in varying degrees of development, and they occur in successive crops. The disease is not painful, but somewhat itchy. It may be attended with rheumatic pain; it may spread to the forearm. We have seen it associated with well-marked herpes circinatus (non-parasitic) of the calf and trunk; with herpes preputialis, and also attacking the lower extremities symmetrically in great severity.

Herpes Zoster or **Shingles** is unilateral herpes, made up of several patches of eruption distributed in band-like course along the superficial nerves. It occurs in persons of all ages. When it attacks the trunk the eruption runs round the side; when a limb, the band-like eruption runs from above downwards. Herpes zoster is preceded, mostly, by severe neuralgic pain along the course of the superficial nerves; and if the chest be the seat of this pain, it may appear as though a sharp attack of pleurisy were impending, but very soon the herpetic patches begin to develop, and the pain abates, at once, as the rule. The patches of herpes do not all appear at the same time, but one after another for a few days, when the eruption reaches its climax. Some of them may be ill-developed. The vesicles soon become turbid, and gradually dry up into darkish crusts, that fall after awhile, and leave decided pits of dull-red hue. The attack of shingles lasts from two to three weeks. It may leave behind it severe neuralgic pain and considerable weakness in elderly people. If it attack the region of the face the eye-

sight may be more or less damaged or destroyed on account of the implication of the nerves. The disease is due to an inflammatory condition of the nerves that go to the seat of eruption, or probably the posterior spinal ganglia connected therewith.

Diagnosis.—It is scarcely necessary to say that the features of herpes are so clear and easily recognizable that it cannot well be confounded with any other disease, except, perhaps, in the case of herpes preputialis, which may simulate chancre; but the acute, simple character of the herpetic eruption, made up of two or three little sores without induration, and speedily healing, are distinctive.

Treatment.—As herpes is a disease that runs, as the rule, a short and definite course, all that is needed is to prevent the rash from being irritated, and to aid the healing by the use of simple, soothing, and astringent applications, such as simple zinc ointment and the like, and exhibiting, internally, salines at the outset if these are indicated, followed by quinine if need be. It is necessary in herpes zoster to protect the eruption from rubbing and irritation by dusting it with (48), (49), or covering the part with cotton-wool. Sometimes considerable pain and discomfort are left by the eruption, and relief may then be given by morphia ointment, opiate poultices, subcutaneous injection of morphia, with or without quinine internally in large doses. In elderly people the general strength must be maintained by liberal food, and even wine in some cases.

Herpes Gestationis, see Hydroa.

Hydroa is a term much misused. It has of late been unhappily applied, particularly by English and French writers to *Herpes iris*, and the bullous eruptions (?) produced by iodide of potassium, but these are perfectly distinct affections. The name hydroa was given by Bazin originally to a disease which stands midway between herpes and pemphigus,

and the main features of which were an eruption of isolated vesicles, occurring in arthritic people, and attacking the cutaneous and mucous surfaces. The disease lasts, in moderately severe cases, two to four weeks or more, and is apt to recur in paroxysmal attacks. It may, however, become chronic. In some cases there are vesicles (*H. vesiculeux*) scattered over the backs of the hands, the shoulders, wrists, or about the knees, and rarely also the mouth, these being developed out of red papules. In other cases the vesicles present an umbilication in the centre (*H. vacciniforme*). In other cases Bazin holds that the eruption is made up of small bullæ of different sizes, but none exceeding that of a split pea, the bullæ often being grouped together. Now there can be no doubt that such a disease as is indicated by Bazin, under the term *hydroa*, exists as a distinct clinical condition, though very hazy notions are held in regard to it, and, as we believe, no satisfactory or complete description of the disease in its several aspects has yet been given. We are, here, only able to indicate in a general summary the features of the several varieties of *hydroa* which we recognize :—

In the first place there are definite symptoms of ill-health of a neurotic character in *hydroa*, or perhaps it would be more correct to say that in cases of *hydroa* it can be ascertained that patients have been subjected to a variety of influences calculated to excite disorder of the nervous system, or to cause shock to the skin through that system. Of these we may name exposure to the cold for long periods, in inclement seasons or in occupation, too rapid growth of body, depression from overwork of body and mind, defective living, great worry, and the like, any of which may be the exciting cause of *hydroa* in marked cases.

As regards the eruption, it varies greatly in severity, but it is symmetrical and mostly pruritic, but this varies vastly in degree. It is essentially vesicular, and the vesicles are isolated as the rule. They develop, generally, out of little itch-

ing papules which can be felt in the skin, and which are often scratched before the vesicle can form. They leave behind, frequently, little, red, pitted spots, surrounded by a slightly raised, infiltrated edge, which puckers in towards the centre. In marked cases the pruritis which antecedes the outbreak of the eruption is severe, and is relieved by the development of the latter. There are other cases in which small bullæ form, and this may be associated with much pruritis. There are other cases in which solitary vesicles are mixed up with quasi herpetic patches (grouping of vesicles), in others large bullæ may occur, and in others the herpetiform rash may suppurate, so that it simulates impetigo. There is a tendency in hydroa to assume the features of herpes on the one and pemphigus on the other hand. The rash attacks by preference the face, shoulders, the extensor aspect of the limbs, and the genital regions.

Three varieties may be conveniently made, not according to the aspect of the eruption only, but also as regards the severity of the attendant itching, and the general course of the disease: these are *Hydroa simplex*, *H. herpetiformis*, and *H. bullosa vel pruriginosa*.

Hydroa simplex may be conveniently applied to the cases in which the eruption is essentially vesicular, and in which the vesicles are quite distinct from one another; comparatively few in number, limited in extent to the face or the shoulders, or the arms, perhaps; without any tendency to grouping of the spots; in which the course is a mild one, and the pruritis is slight, the general health being fairly good. We frequently in England observe such cases attacking the face, or the face and shoulders together. These are regarded as acne, but are perfectly distinct from that disease.

Hydroa herpetiformis.—In another set of cases the disease is more severe in all particulars, more pruritic, and

the eruption tends in part to assume an herpetic aspect; and indeed may be regarded as herpetiform in a great measure. It is more or less general. The aspect of *H. simplex* so far as regards the vesicular rash, may be also present. This form may be termed *H. herpetiformis*. We take it that Hebra's impetigo herpetiformis is a severe aspect of this form of hydroa. *H. herpetiformis*, as we have just depicted it, is, in our experience, not very rare about the genital parts. The disease *may* run an acute, but mostly has a chronic course.

Hydroa bullosa or Pruriginosa.—In a third set of cases the rash is bullous, but the bullæ are small; the eruption is widely scattered about the body and symmetrical. There is severe pruritis before the successive outbreaks of the fresh bullæ, and also after their appearance, so that the patient scratches a good deal. The bullæ dry away into little *bouton*-like spots the size of a good sized split pea, with a slightly-raised, soft and red edge, and depressed centre, occupied by a little blood crust, and towards which the circumference puckers. This variety of disease is very chronic; it is prolonged by successive increments of eruption, and the features of the rash of the simple or herpetic varieties may be intermingled with its own. This variety is probably the same thing as the *pemphigus pruriginosus* of old writers, and it answers to the *Herpes gestationis*, so well and correctly described by Bulkeley and others.

Diagnosis.—Hydroa requires to be distinguished from *varicella*, *scabies*, *erythema multiforme*, *pemphigus* in anomalous forms, and *acne cachecticorum*. The first is an acute febrile disease, the second is known by the presence of cuniculi; the third is erythematous, and not vesicular; the fourth is not a pruritic disease, and has characteristic bullæ, and the last is an indolent, painless acneiform rash, developed without any sign of vesicles or bullæ, and devoid entirely of itching.

Treatment.—This is a matter of the greatest difficulty. Diuretics are valuable in all acute cases in which there is much hyperæmia associated with the rash, or the eruption is herpetiform in aspect. Stomach derangement, accompanied by a white flabby tongue and torpid bowels, inducing headache and “white” urates, and more or less debility, must be remedied by alteratives and cholagogues before any more definite treatment appropriate to the hydroa, is adopted. All causes of depression of the nervous powers must be carefully inquired into, and removed, as well as all the causes of shock to the skin. The diet must be good but unstimulating, and the general tone of health promoted by change of scene and air if need be, and by rest of jaded bodies and minds. The most efficient remedies for severe and chronic cases, in our hands, have been found to be cod-liver oil, with iron and belladonna. We much prefer cod-liver oil to arsenic in this as in most other cutaneous troubles, as a nerve tonic. Sedatives internally and anti-pruritic remedies externally, do not often appear to produce any decidedly beneficial results. But alkaline and bran baths, with simple, soothing lotions are useful as topical remedies. We hope shortly to take an early opportunity of elsewhere recording more fully our experience of hydroa.

Hydroadenitis is an inflammation of the sweat glands, or rather the connective tissue about them. This condition commences by the appearance of small lumpy swellings like blind boils, but which do not suppurate, though they remain some time painful, tender, enlarged, and of a dull red color, like huge *acne indurata* spots, only that they possess no central pustular point or follicular orifice.

Treatment.—This consists in allaying the local inflammation by ordinary measures, such as hot-water bathing and the free use of a calamine lotion, and subsequently painting with collodion, or stimulating the places when indolent with the

application of the acid nitrate of mercury; or, should this not succeed, subcutaneous puncture may be employed. In some cases which occur in strumous subjects, the disease is greatly influenced for the better by a course of cod-liver oil.

Hyperidrosis signifies excessive sweating. This occurs under a variety of conditions.

It is observed, in the first place, as part of a general affection during the course of a number of febrile conditions, especially when convalescence is impending, in which case it is said to be "critical." In ague it marks the "sweating" stage. It is common in connection with "hectic" of phthisis, and other disorders. It is a marked feature in acute rheumatism. Usually in these cases the sweat escapes free upon the surface, but it may collect beneath the cuticle, and then gives rise to *sudamina*. It is not a condition requiring special treatment.

Hyperidrosis is observed also as one of the results of disturbance of the nervous system, though this may not be associated with any recognizable organic change. Under these circumstances it is often unilateral, affecting one side of the body or face, and is only a symptom of some other more important disorder.

But there are other cases which cannot be said to be recognizably connected with any general disorder, but are apparently of local origin. The glands of skin of the hands and feet of the locality adjoining the scrotum and contiguous part of the thigh, the axilla, seems to pour out an excessive amount of sweat, which is often offensive, and acts as an irritant, producing redness and swelling and even eczema, and very frequently maceration of the epidermis, which becomes white, and peels off freely, leaving a congestive and perhaps discharging surface below. The fluid sweat may be absorbed by boots and socks, giving rise to great unpleasantness. These local hyperidroses are associated with languid,

cutaneous circulation, and a strumous or lymphatic diathesis. The feet in flat-footed domestics are frequently affected. The disease is quite distinct from dysidrosis.

Treatment.—In the class of local cases mentioned immediately above, a general tonic plan of treatment must be adopted, with the utmost cleanliness, and some such local application as belladonna or alum. The alum should be used in a *pediluvium* at night, about two ounces being used each time. Should the sweat have macerated the cuticle between the toes and excited an eczema, the parts must be constantly bathed, some absorbent powder used, as (48), (49), and then such as (10), (12), (14), (17), etc.

Ichthyosis or Fish-Skin Disease is a morbid alteration of the structure and function of the skin, and is characterized in its slighter forms by a dirty, dry, harsh, ill-nourished, non-perspiratory, wrinkled condition of skin, which is covered to a varying extent by semi-detached, thin, cuticular scales; and in its more developed forms by papillary hypertrophy and excessive epidermic formation, matted together into dirty or blackened masses, looking as if mud had been caked on the parts, generally intermingled with abnormal sebum from the disordered sebaceous glands. In both forms the natural furrows of the skin are much exaggerated, and in the more developed cases they appear as a regularly arranged system of fissures and cracks.

Between the slightest and extremest forms of development there are a great number of degrees of severity of the disease, and, as they present great variation in aspect, a multitude of names have been applied, indicative of the likeness simulated to the skins of the shark, the snake, the rhinoceros, the porcupine, and crustaceans, etc.

The slightest form of the disease, which has long been known in England as *xeroderma*, is characterized, as before mentioned, by a dry, harsh, ill-nourished condition of

skin. The latter is thinned, dirty-looking, prominently furrowed, and covered with a slight amount of cuticular scales, detached at the edges and attached in the centre, presenting in different places, according to their size and quantity, various appearances. It is important to note that Hebra applies the term *xeroderma* to a totally different affection (*see* Atrophy of the Skin).

When the xerodermatous condition is very well marked, and a parchment or mother-of-pearl aspect is presented, the disease is called *Ichthyosis nacrée* or *nitida*. When, further, the epithelium is very abundant, the papillæ are enlarged, the discoloration more manifest, and the whole affection more exaggerated, it is called *I. squamosa*, *simplex*, or *vulgaris*.

In more extreme cases still, the epidermis may form hard, brittle shields, looking like dried mud, regularly fissured in correspondence with the natural furrows, or be raised up into prominent horns. To these extreme conditions the names *I. cornea*, *I. hystrix*, and *I. hystricinus* are applied.

The appearances presented are not necessarily the same in all regions of the body of the same patient, or on the bodies of the several members of the same family affected, but different aspects or stages may be marked in the different parts; thus xeroderma may be developed in one individual and ichthyosis in another.

Usually the whole surface of the body is more or less involved, but the face generally escapes, in a great measure, and so do the bends of the joints, the genitals, the palms, and soles. The fronts of the knees are especially implicated in the ordinary ichthyosis. But whilst the disease may be diffused uniformly, it may occur, rarely, in patches or in lines which occasionally have some correspondence with the distribution of the nerves. There are two features about the disease which should be mentioned. First, its heredity is often very strongly marked, and secondly it is congenital.

As Hebra truly says, however, it is not congenital in one sense, *i. e.*, present at the time of birth, though it is so in the sense that "the conditions necessary to the later development of the disease are present as an original morbid disposition of the skin." Ichthyosis develops in children when they are somewhere about the age of two years, or a little before, and after going through several stages it may stop at one of them, and remain throughout life without further alteration. It should be stated, however, that there is a very rare and truly congenital xerodermatous-looking condition occurring in children who rarely survive their birth long, which is really a seborrhœa.

Pathology.—This consists in an alteration of the *structure* and of the *functions* of the skin, especially with regard to the sebaceous glands, and according to the variety of case one or more of the following conditions are in especial prominence. There is a papillary overgrowth with heaping up of cuticular cells, which are mixed with altered concreted sebum and accumulated dirt. There may also be excessive pigmentation. The corium is thickened, but the subcutaneous fat lessened. The sebaceous glands are generally much disturbed in function and often atrophied, and the sweat glands less frequently so. The skin is always dry from want of perspiration in ichthyosis. Chemical analyses show that the inorganic salts in the skin are increased in quantity, especially the salts of lime, oxide of iron, and silicic acid.

The diagnosis is not usually difficult. When occurring, as it rarely does, in a localized form, it might be mistaken for seborrhœa, but the history, the absence of papillary hypertrophy, and its curability will readily distinguish the latter. Some remarkable forms of seborrhœa simulating ichthyosis have been met with, and the condition is known as "*spurious ichthyosis*." The milder form, xeroderma, might more easily be confounded with other harsh, ill-nour-

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ished conditions of the skin in the young; but the history will usually distinguish it.

Treatment.—Ichthyotic conditions of the skin are incurable, though much amelioration may be given. Internally, in all forms, general tonics and cod-liver oil should be given. Externally, for the xerodermatous conditions, the skin should be kept *greased* by any preparation most agreeable to the patient, such as elder-flower ointment, olive oil, vaselin, etc. This should be specially insisted on in the winter, when the discomfort attending these conditions of skin are always exaggerated. In the most marked conditions the crusts must first be removed by prolonged use of alkaline baths, mild soap, glycerine, tar, and such like remedies, but these must not be allowed to irritate, and when once the skin is got clean, it should be kept so by constant bathing and greasy inunctions; for if these applications be left off, the disease tends to return.

Impetigo is a pustular eczema. *See* Eczema. There is a specially contagious variety, which we will describe under its title of *Impetigo contagiosa*.

Impetigo Herpetiformis, *see* Hydroa.

Impetigo Contagiosa.—In the year 1864, Dr. Tilbury Fox described, in the *British Medical Journal*, this special form of cutaneous disease, which had up to that time been confounded with ordinary impetigo, and classed with other eruptions by writers under the indefinite term “porrigo.” In the *Journal of Cutaneous Medicine* (1868) he re-discussed the subject, and added further illustrative cases. The disease was soon recognized by Clifford Allbutt, McCall Anderson, and others in England; by R. W. Taylor (1871), Piffard, Bulkley, and others in America; and by Kaposi (1871) in Vienna.

The disease may be epidemic, but is mostly sporadic, and it mostly attacks the children of the lower orders; but it occasionally occurs in those of a better position, though the cleanliness exercised with the latter, limits materially the spread of the disease. A characteristic feature is that the subjects of it are often healthy, thus pointing to a difference between it and eczema. The eruption is generally preceded for a day or two by malaise, which may be slight, and even unnoticed, or quite severe, and its evolution is now and then accompanied by a certain degree of pyrexia and constitutional disturbance. The eruption consists at first of coarse, isolated, and *discrete* vesicles¹ or small bullæ—"little watery heads"—which very rapidly become pustular and opaque, flattened, and, it may be, umbilicated. In the slighter forms there is no inflammatory areola, but in the severer forms there is a zone of redness around the vesico-pustules. In five or six days the spots reach the size of a large pea, or a three, four, or six-penny piece, and, if unruptured, in some cases a larger size. The vesico-pustules then dry into flat, yellow crusts, which look as if they had been stuck on. Sometimes they become confluent, and a considerable area of scab is produced, but the characteristic spots are generally recognizable at the borders of the patch. Each spot runs its course in a week or ten days. The skin is quite superficially affected. There is no deep infiltration, and the spots are *not painful*, and when the scab drops off a reddened, desquamating surface is left, but no ulceration except in strumous and unhealthy subjects. Dr. Tilbury Fox could not find any fungus in the vesicles, but only later on in the crusts, stating that this is an *accidental* occurrence. However,

¹ Dr. T. P. Foster has described a mild and abortive form of contagious impetigo under the name herpes contagiosus varioliformis, in which there was not any initial fever, and in which there was a marked papular stage, and multiformity of eruption present.

other dermatologists have recorded its presence, but these observers differ widely in their descriptions amongst themselves, and some of the cases were certainly not true examples of this affection. The usual sites first occupied by the eruption are the face, the hands, and sometimes the head, and more rarely the body; but wherever it first appears it is generally inoculated in other parts by scratching. The mucous membrane and the conjunctivæ are not infrequently implicated. The extent of surface attacked, however, is very varied. Lastly, although all parts of the eruption do not evolve simultaneously, the appearance of the disease is very uniform, and the disease tends to run a definite course.

Diagnosis.—"The direct guides to the disease are its apparently epidemic character in many cases; its attacking children, perhaps several in a family; the antecedent pyrexial affection of the general system, clearly of acute production; the presence of the isolated, flattened, light-colored, 'stuck-on' scabs, replacing flattened bullæ, which have developed from well-formed vesicles; the *uniformity* of the eruption; the eminently contagious nature, and the inoculability of the secretion; the absence of pain and any itching of consequence, save occasionally at the outset." There are several diseases with which it might be confounded by the inexperienced, and amongst the least likely are pemphigus, hydroa bulleux, varicella, and, when on the legs, ecthyma. Pustular scabies may offer more difficulty in some cases about the legs and arms. But it is with eczema impetiginodes that confusion is generally made. It is distinguished from the latter by the acute febrile movement, the site, the absence of infiltration of the skin, its easy cure, the character of the crusts, its definite duration, the discrete arrangement of the crusts, and the constitutional condition. The difficulty, however, exists in the confluent cases of impetigo contagiosa, and especially where it occurs about the head. Pustular eczema, too, is undoubtedly inoculable from place

to place. Attention to the character given, and observance of the disease at the borders of the confluent patches, will generally solve the difficulty where such exists.

Treatment.—The scabs should be removed by bathing or oiling, when it is only necessary to apply to the part beneath a weak ammonio-chloride of mercury ointment (gr. v to ʒj) night and morning, for a few days, and the eruption will generally speedily disappear. Occasionally the healing up of the spots is delayed by ill-health, and in this case a little quinine and steel will be found useful in conjunction with some slight aperient.

Intertrigo, *see* Erythema.

Iodide of Potassium Rash is chiefly of two kinds, the *acneiform* and the *bulliform*; but it also produces *purpura*. In many patients iodide of potassium excites a rash which is not distinguishable from common pustular acne, save that it is not confined to the face, but is distributed irregularly in different parts of the body. This rash may be so inflammatory as to appear ecthymatous. The drug may also excite what seems at first sight to be a true bullous eruption, in connection with much general depression, ulceration of the tongue, and large fungatory sores originating apparently in the bullæ, which often freely crust before ulceration. But these so-called bullæ begin as hard, painful papulæ, and are, I believe, seated at the hair follicles. The iodide stimulates the glands, and the effusion of fluid sebum intermixed with serum is so free and rapid that the essentially acneiform or follicular character of the rash is lost in the quasi bullæ which result. These so-called bullæ are very tense, painful, and feel solid. They have very solid bases, often exude a *thick*, creamy, pus-like (?) fluid, and after bursting their base fungates into a large, raised, grayish-yellow papillated mass, which on healing away leaves a decided scar. Such

cases are very rare indeed, and they occur in exceptional instances where persons have a peculiar idiosyncrasy as regards iodide of potassium. A few doses of the drug given for four days may excite this latter rash, and it will rapidly disappear when the drug is given up. (See *Chir. Soc. Trans.*, for a communication, with illustration, by Dr. Tilbury Fox.)

It is also said to excite a purely bullous eruption undistinguishable from pemphigus occurring in the uncovered parts of the body especially.

Itch, *see* Scabies.

Keloid is a hypertrophic outgrowth of the fibro-cellular tissue of the skin. There are two forms, the *idiopathic* and the *traumatic*, the latter originating in an excessive growth of the tissue of a scar following the use of the surgeon's knife, or the applications of acids and the like. In the idiopathic form, a firm, prominent, palish-colored nodule appears on the skin and sends out processes, as it were, from its periphery, which by their contraction pucker in the skin around towards the central mass. The contractility of the keloid tissue indeed is characteristic.

Treatment consists in avoiding all irritation of the keloid growths. If removed they recur.

Kerion, *see* Tinea kerion.

Lepra is an old term for psoriasis, and especially that form which consists of circular rings of disease.

Leucoderma (*Pigment Absence*).—This term is applied to the condition presented by the skin when there is a diminution in the normal amount of pigment, whether congenital or acquired, local or universal, when unassociated with any textural changes.

Albinismus.—When the pigment is congenitally, universally absent, the state is called *albinism*, and it may occur in all races, though affirmed to be more common in some countries than others. Albinism persists through life, and the deficiency of pigment, beyond rendering the skin very sensitive and the eyes unable to bear a strong light, is not associated with any constitutional conditions beyond some delicacy. Albinos may be born of normally pigmented parents, but how far the converse is true is not well known. Besides this universal condition, a local deficiency of pigment is met with as a congenital condition, certainly amongst negroes.

Leucoderma proper (the Vitiligo of Hebra) is applied, in a more limited sense, to the acquired forms. An unimportant variety may follow prolonged pressure, burns, or other injury, or textural alterations of the skin. Another very common and striking variety occurs in dark races, and causes the subjects of it to assume a piebald appearance. It may ensue upon illness, and often undergoes increase and diminution with varying health. In a third variety, met with amongst fair races, there is not only a deficiency of pigment in circular or oval, detached patches, but an increased deposition in the immediate neighborhood. In fact, the appearance presented is as if the pigment had been removed from the centre of a patch to the periphery. It is important to notice, for diagnostic purposes in extensive cases, that in these patients the white patches present a well-defined convex border to the peripheral pigment, and the latter a concave border to the white patch, also that there is no textural alteration, secreting function, or sensation perversion. This form of leucoderma may be local or very extensive, and involve the hairy parts, it is usually tolerably symmetrical, and occurs in people of dark complexion. Age and sex have no influence, but it is rare in children. There is generally no special dyscrasia, but it occurs in individuals

who are not very vigorous. Sometimes, however, there is distinctly faulty innervation, or it ensues on severe illness.

The treatment is by cod-liver oil and tonics. Locally, it is generally useless and inadvisable to meddle, but stimulants, such as mustard and cantharides, are occasionally used.

Lichen is a disease, the description of which is omitted by many writers under the belief that it is a species of eczema, but there is an independent disease to which the term has been long applied in England. True lichen is characterized by the presence of solid pale fleshy papules about the size of millet-seeds, which preserve their characters as papules throughout their existence, and are accompanied by marked itching. The skin generally, moreover, is usually dry, somewhat thickened, and often of muddy aspect. The eruption may appear in the form of very pale, flesh-colored and scattered papules (*L. simplex*), attacking one or more regions, or even the greater part of the trunk, and more rarely about the extremities: sometimes as groups of papules (*L. circumscriptus*). Often the lichen attacks the backs of the hands, which may, *secondarily*, become inflamed and give out a discharge (*L. agrius*). The disease in this situation is excited by the contact of irritants, as sugar and flour, and then bears the name of Grocers' or Bakers' itch (*vide* these), and under these circumstances the eczematous complication becomes the chief trouble. If the lichen papules are seated at the hair follicles, giving the surface a dotted, or, even, on a small scale, a rasp-like appearance, the name *L. pilaris* is given; but this term is also made to include not only inflammatory infiltration around the hair follicle, but also that condition in which papules are produced by the choking of the follicles by epithelial exuviae or sebum, which occurs in persons whose skin is inactive. So-called *L. lividus* is a *purpura*; that is to say, there are little hem-

orrhagic papules formed. Of late years, dermatologists have with some approach to unanimity recognized two other forms of lichen, first described by Hebra, viz., *Lichen ruber* (which includes the *Lichen planus* of Wilson), and *L. scrofulosorum*. *Lichen planus*, as described by Wilson, consists of solid, red papules of very special features, which stud various parts of the surface symmetrically, the front of the forearms, especially the wrists, the flanks, the abdomen, the hips, and the legs below the knees. These papules attain the size of a large pin's head or more, and are dull red, angular at their bases, flat at top, with a peculiar shiny or glazed aspect, and umbilicated more or less distinctly. At first they are discrete, but they group together into patches by the springing up of new papules between the old. Then the patch becomes red, infiltrated, and slightly scaly, and presents the aspect of psoriasis, for which the disease is frequently mistaken, but it is distinctly papular at the edge. Dull, colored stains are left on the disappearance of patches or papules. The disease is accompanied by a severe burning sensation, or itching, and the patients attacked are usually much out of health. In some cases the surface of the body is more or less generally involved; but as the rule, while the papules are not so large as in *lichen planus*, they are more confluent, or rather, patches occupying the whole regions are formed. Accompanying the rash there are also marked hyperæmia, itching, and more rarely considerable marasmus, nervous irritability, and like symptoms. There are all stages between lichen planus and lichen ruber, and the latter exhibits in places the characteristic discrete papular rash of the former. This severer phase is rare in England; it is the *L. ruber* of Hebra, but the two conditions are different degrees of the same disease. Hebra has also correctly described a *L. scrofulosorum*, which occurs in those who exhibit decided signs of scrofula. The eruption is made up of circular groups of little pale papules the size of millet-seeds,

each having in its centre a little exuvial plug. There is no itching. If the disease be severe, acneiform pustules may develop interspersed with the papular rash. It attacks, by preference, the trunk.

Diagnosis.—We need only refer to lichen ruber. Its itching and the presence of its papules on the forearm should not mislead to the idea of its being scabies. The papules are so very characteristic that they should be recognized at once by their flatness, irregularity, and glazed appearance. When patchy the disease may be thought to be psoriasis, but the presence of characteristic papules again, and the “papular” origin of the rash, and the presence of very thin pus, and not silvery scales, distinguish lichen planus or ruber. We have known the two aspects of the disease mistaken again and again for a syphilitic disease, but this arises from ignorance of the existence of such a malady as lichen planus. The papules of syphilis are wholly unlike those of lichen planus, which lack all concomitant evidences of syphilis.

Treatment.—Lichen simplex and circumscriptus must be treated as simple inflammations. A loaded system, pyrexial condition, or debility should be attended to, but alkalies should also be exhibited in some form or other. Should the disease not speedily disappear, a mild mercurial course, or one of Donovan’s solution, may be given together with cod-liver oil. Locally alkaline and gelatine baths, with remedies to allay irritation, are needed, as (14), (16), (20), (23), (24), (30), (32), (37), (38), (47). Lichen agrius must be dealt with as an eczema rubrum. In *L. planus* the indications, as regards internal treatment, are to improve the tone of the nervous system by rest, change of air, and general tonics, including arsenic, but especially the mineral acids and bitters; to alleviate dyspeptic troubles; to feed up the patient; and lastly, to attempt to diminish hyperæmia by astringents, such as perchloride of iron. As regards local medication it is needful to allay irritation by gelatine and alkaline baths

(1a and 1b), and by sedatives (23 *et seq.*); to diminish hyperæmia by the use of such remedies as (74), (14); and, finally, to promote the absorption of the papules, especially by vapor baths, and cautiously employed tarry compounds. In the severer aspect of the disease termed lichen ruber, arsenic may do good, but we have not found it efficacious. There is considerable nervous excitability, and sedatives may be required, but the general treatment is the same as that for lichen planus.

Lichen urticatis, see Urticaria.

Lupus is a disease characterized by the formation in the skin of a neoplasm or new growth, whose minute characters are those of granulation tissue, and which occurs in the form of a diffused infiltration, or of tubercles. This new growth tends to invade and destroy the true skin textures, the corium, the glands, and the vessels, etc., and to undergo, in effecting these changes, degeneration itself, so that all that is left behind where the disease has had full play is cicatrized tissue.

There are two main varieties of lupus termed respectively *L. erythematodes* and *L. vulgaris*, the main difference being that in the *former* the sebaceous glands are especially and primarily implicated, whilst the new growth occurs in a diffused form; and in the *latter* the growth arises in the corium tissue itself, and occurs in nodules or tubercles from the outset.

L. erythematodes is the term applied, as just indicated, to the superficial lupus in which the sebaceous glands are especially implicated, and comedo-like spots, indicative of the irritation, infiltration, and choking of these glands and their ducts by secretion, stud the otherwise reddened and somewhat raised surface, which is also affected by the new growth. The disease attacks by preference the face, and especially the nose and cheeks of young women of lymphatic temperament, but it is also seen on the scalp, fingers, and, more rarely,

in other parts of the body. It begins about the time of puberty; it is more common in women than men; runs a very indolent course, and is rebellious to treatment.

In its most common seat, the face, it begins frequently like an erythema, or the disease may assume the aspect of a slight seborrhœa. The patches are often very small, and there may be one or several. Under the eye is the favorite locality. This erythema or seborrhœa may at first disappear, but soon returns, and then it assumes an obstinacy which does not belong to either of these two conditions above named, and this feature attracts attention. The patches are more or less circular, very well defined; their edges raised, and thin *adherent* scales form upon them, or the comedo-like bodies make their appearance; and at this stage, which is an early one, the deeper tissues of the affected part seem to have thinned a little—in fact atrophy sets in. This settles the diagnosis at once. As the disease progresses, the centre sinks from increasing atrophy, becomes paler, and now, if not before, the orifices of the sebaceous ducts are very patulous and distinct, the patches enlarge, and if near coalesce. Often there is a patch under each eye, and if these bridge together and form a junction over the nose, the appearance of a butterfly is produced, hence the term *butterfly lupus*.

When the hands are affected, the patches look like chilblains in slight cases, but the disease may occur in summer. In marked cases atrophy is always present. When the scalp is affected, there is at first a red infiltration covered by adherent scales, and then the tissues atrophy, and become white in aspect, like cicatricial tissue, whilst the hair is lost, and baldness of course results.

The subjective symptoms are limited to itching and burning. The general health is sometimes good, but mostly feeble and unsatisfactory. We have described a disseminated, follicular lupus simulating acne (see *Lancet*, 1878).

Lupus Vulgaris.—In this disease the neoplasm takes the form of red, or at first yellowish, solid, more or less elevated, surfaces, varying in size from a small pea to very large areas, due to the growth or coalescence of different points or patches of disease. The morbid growth is elevated above the surface, and is a well-defined outline; as the rule, it is covered over by a thin layer of adherent cuticle, which generally gives the growth a slightly scaly aspect, and vessels are seen to course over and about the tubercles before ulceration has set in. The neoplasm, which has a semi-gelatinous aspect when fully grown up, originates in the corium, spreads upwards and outwards and more or less deeply, and destroys in its increase the normal textures so as to induce their atrophy and disappearance. Scarred tissue is left behind, it is thick, whitish, glistening, and shows little disposition to contract. If the lupus tissue be removed by insensible absorption, commencing with its degeneration, there is no ulceration. If it break down freely, ulceration occurs prior to cicatrization. The disease is attended by itching at times, and perhaps some pain in the ulcerative stage. It begins at an early age, generally about puberty; attacks the face by preference, especially the nose, cheek, and ears, but it also occurs on the trunk and extremities. It occurs in lymphatic and strumous subjects.

There are no true varieties in reality, the so-called varieties are, clinically speaking, different phases of the same disease. If the lupus consist of tubercles scattered or crowded into a patch, the disease is termed *L. tuberculosus*, which may or may not in later stages ulcerate, hence the terms *L. exedens* and *non-exedens*. If the disease present the aspect of a general infiltration, followed by thinning of the textures and marked scaliness, it is termed *L. exfoliativus*. If there be much thickening and elevation, due to concomitant increase of the connective tissue elements, the disease is termed *L. hypertrophicus*. In serofulous persons the ulceration is free, and

large, dark, heaped-up crusts form, hence the unnecessary term *L. scrofulosis*.

Diagnosis.—It will suffice to make an easy diagnosis, in a large number of cases where a doubt may exist as to the disease possibly being syphilitic, if it be remembered that in lupus the skin trouble stands alone as the total disease, and that there is an entire absence of any of the ordinary concomitances of syphilis, nor is the skin mischief multiform in the character of its essential lesions.

Treatment.—Lupus erythematodes is often difficult of cure. The lightest cases may be remedied by cod-liver oil, liberal diet, and iron internally, and painting constantly with liq. plumbi, or iodide of starch paste (*vide* formula). Severer cases are better treated with mercurial plaster, tarry applications, tincture of iodine, or a strong solution used once or twice a day. If these fail a solution of caustic potash and water in equal parts, the fuming, acid nitrate of mercury, Vienna paste, and other caustics are serviceable, and they must be re-applied till proper cicatricial tissue results after the healing of the caustic wound, which should be accomplished by dressings with unguentum diachyli after each application of caustic. Lately, scooping and scarification, or multiple puncturing of the diseased surface have been recommended, but these do not, we think, offer superior advantages. In obstinate cases, perhaps, strong iodine or arsenical caustics are the best, but must be used with due caution.

In the case of lupus vulgaris the same principles of treatment apply, whilst the general health is to be improved in every way, and especially in strumous subjects, by cod-liver oil, iron, fresh air, seaside change, a full milk and fatty diet, and the like; the essential point of moment is to destroy the new growth by caustics repeatedly applied, but not so as to produce unnecessary cicatrization. Great care is necessary in the application of these remedies, and judgment in the selection of appropriate times and cases. Whenever a lupus

is very tender, or shows a tendency to spread rapidly, or becomes hyperæmic under slight causes, caustics should not be used, but they are particularly indicated when the disease is indolent. When the lupus is red, tender, and irritable, it is useful to exclude the air, and paint once or twice a day with liquor plumbi for some time. The caustics most suitable are (5) and (9), and it is best to use them to the edges of the patches in the first instance, and apply a poultice if there is much pain. The caustic may be repeated at intervals till an apparently healthy surface appears, and one that seems inclined to heal. The surface should then be dressed with some simple astringent, as (74) or (35). When lupus patients are out of health, they should take appropriate tonics, iron, especially cod-liver oil, and quinine. The slighter forms of lupus may often be cured by the application of astringents only.

Maculæ.—There are four chief forms—viz. : (1) The *pigmentary*, occurring idiopathically as in leucoderma and melanoderma, or symptomatically in connection with uterine excitation, and certain cachexiæ, or after certain eruptions (see Pigment increase) ; (2) the *parasitic*, as in tinea versicolor ; (3) the *chemical*, due to the use of nitrate of silver ; (4) the *hemorrhagic*, as in purpura (see the special descriptions of the diseases here named).

Medicinal Rashes.—Some medicines when taken internally bring out on the skin an efflorescence, a fact which it is well to be acquainted with. Thus *Arsenic* is said to excite in rare instances Herpes zoster, and to lead to induration of the palms of the hands. *Iodide of Potassium* may induce an acne, and very rarely a bullous eruption, with fever and great constitutional disturbance (see *Iodide of Potassium Rash*). *Bromide of Potassium* excites a somewhat similar acne, as well as other phases of eruption due to inflammation of the sebaceous glands (see *Bromide of Potassium Eruption*). It is not very unusual to meet, whilst ad-

ministering *Copaiba*, with a raised, red, uniform, terribly pruritic, hyperæmic rash, which now and then goes on to vesiculation. It attacks the arms in chief measure. Scarlatiniform eruptions have been met with also during the exhibition of *Chloral*, *Salicylate of Soda*, *Belladonna*, *Morphia*, but they must be looked upon as of very exceptional occurrence. *Quinine* eruptions have been recorded a considerable number of times now, and they assume usually a scarlatiniform or urticarial aspect.

The external applications of various drugs and vegetable juices are well known to produce eruptions. We need not refer to the causation of blisters and ulcers by caustics, etc. *Arsenic* commonly excites an inflammation of the skin, and it is an active agent in giving rise to the erythema, papules, vesicles, pustules, and ulceration following the wearing of (a) articles of clothing brilliantly colored by the aniline dyes; (b) green ball-wreaths, artificial flowers, etc. Many dyes, even apart from the arsenic, are capable of exciting a mild dermatitis. *Strong mercurial or tartar emetic ointments* will occasion a pustular eruption, as will also *Croton oil*. *Undiluted Arnica* may cause very severe inflammation. *Tar* brings out an acne, and *Sulphur* a papular and then a vesicular eczema.

Amongst the irritant juices of plants, which occasion an inflammation of the skin, that of the *Nettle* is well known. For America two species of *Rhus* (viz., the *poisonous sumach* or *dogwood*, and the *poison ivy* or *oak*) excite in some persons, by contact or proximity to the plants, an erythematous though usually vesicular eruption of very extensive and often severe character.

Miliaria is characterized by the formation in the skin of a soft, red, pruritic, pimply eruption, the papules of which it is made up rarely exceeding a pin's head or a millet seed in size. It is due to disordered action of the sweat glands,

i. e., either from the overtaking of their functions, or from the irritation of abnormal secretions. The excessive or suddenly increased amount of sweat may be due to the influence of temperature, a special excitation of the glands, or the derangement of the vaso-motor system from debility. The textures immediately surrounding the gland and its duct are irritated and become hyperæmic, so that a soft red papule is produced. It is possible that this papule may be vesiculate in certain cases, but the vesicles which are so frequently found capping the papules, or intermingled with them, are sudaminal in nature. It should be remembered that the contents of the vesicles may become purulent. A severe form of Miliaria has already been described under the term *Lichen tropicus*. Although all regions of the body may be affected, those parts more specially subject are the trunk and neck and then the arms. It may appear suddenly and as quickly disappear. The summer is the season when Miliaria is more frequently met with, but it may occur in winter—for instance as a complication of Dysidrosis—and is not uncommonly seen at all seasons on the bodies of persons in states of pyrexia where there is excessive sweating, *e. g.*, in Phthisis and Rheumatism.

Treatment.—When met with as an accidental occurrence in the sweating of pyrexial states, it is of little importance; also when seen in the summer months, when the hyperæmic spots may only require a soothing calamine lotion. But in other states the causation of the Miliaria is due to a debilitated nervous system, and nervine and ferruginous tonics, etc., are indicated.

Molluscum contagiosum is a disease of fairly common occurrence, in which the sebaceous glands are enlarged and distended by an excessive quantity of sebum, so that soft, sessile, pearly or pinkish-looking, little round tumors, which resemble white currants or pearl buttons in rough

outline, are produced, which have the peculiarity of an umbilication in the centre, disclosing the distended opening of the gland duct. They vary in size from a pin's point to a walnut, it is said; but usually they average that of a good-sized pea. A white cheesy matter may be squeezed out from the opening, and the sac thus more or less emptied. The face is the chief seat of the disease, and it occurs mainly in children. There may be several or a great number of these little tumors present in a given case. It is apparently semi-epidemic at times, and appears too to be contagious.

If left alone the tumors generally suppurate, and then disappear, leaving cicatrices.

The disease is of sebaceous origin clearly, and our own independent observations, recently made, have re-established this point. Lately it has been affirmed by Bœck, Lukowsky, and others, that the disease arises from a growth downwards of the interpapillary portions of the rete Malpighii, followed by degenerative changes in the central cells, and their expulsion through a central aperture. We find that each tumor consists in hypertrophy of sebaceous glands, with increased rapid endogenous formation of cells, that become completely vacuolated and distended with altered sebum, and form the concreted mass of contents.

Diagnosis.—Molluscum contagiosum tumors are distinguished from small fibromata by their central aperture, and the presence of sebum within them, which can be expressed readily. On the genitals they are commonly confounded with warts and condylomata, but the same points suffice for their distinction.

Treatment.—This consists, in the early stage, of touching them with a point of caustic or the acid nitrate of mercury. If the tumors are of any size, their contents should be squeezed away, and the sac of the growth then touched with some mild caustic.

Morphœa.—Synonymes, Addison's Keloid, and Circumscribed Scleroderma (Fagge).—Attention was specially drawn to this disease by Addison as a form of keloid, and a well-defined position was accorded it by the excellent description of Wilson in 1868. In America it has since been pretty generally recognized, but in Austria it is still confounded partly with anæsthetic leprosy, and, in the more severe forms, with scleroderma. Wilson also and others are inclined to regard it as a remnant of leprosy left with us. It is a somewhat rare disease, and its appearance is so striking that when once seen the disease will probably be never forgotten. It occurs at first in isolated patches, either single or multiple, and often extensively distributed; these patches may subsequently coalesce into large areas. The patches are usually more or less rounded, but occasionally occur in irregular bands or stripes or even in lines and spots. In the common form (*M. alba*) the disease begins as a delicate purple or lilac blush, which is temporarily diminished by pressure. A pale, slightly depressed area then becomes apparent in the centre of the blush, which is not an "erythema" in the ordinary sense, and gets more and more defined, whiter, denser, smoother, and more polished. Occasionally the cuticle desquamates slightly or becomes wrinkled like tissue paper. The central white surface gets less and less mottled by straggling venules, whilst the dilated veins become more apparent and the amount of blood supply increased around its edges, forming the characteristic lilac fringe. The patch may attain a size involving the whole surface of the mamma. It is in this condition that the patient usually comes under observation with the dirty alabaster, or bacon-fat looking, circumscribed patches, giving the notion of a piece of white wax having been let into the skin. In the rarer form (*M. nigra*) the diseased conditions are similar, but there is a varying degree of dark pigmentation of the patches simulating leucoderma. Evidently there is an overgrowth and condensa-

tion of the fibrous tissue, or an infiltration, which disturbs the circulation and causes the prominent superficial venules, and, as it increases and obliterates the bloodvessels, induces the condition seen immediately beyond the area of the disease. As the disease progresses atrophic changes occur (*M. atrophica*), often to a considerable extent. The nerves of sensation are to some extent secondarily interfered with, producing differing degrees of anæsthesia. Whether the nerves play a more intimate part has not yet been demonstrated, but there is sometimes precedent pain, and, coincidentally with the progress of the disease, generally either tingling, or burning, or slight itching, or numbness. The perspiratory and sebaceous glands, and the formation of hair, are all interfered with in the patches. We have hardly material enough yet to argue as to its neurotic distribution, but it is rarely a symmetrical disease, and often confined to one part and one side of the body. Drs. Wilson, Tilbury Fox, and Duckworth have called attention to its situation over the course of the supra-orbital nerve, especially on the left side. In Wilson's cases the trunk, which includes the neck, was chiefly affected in 11 cases, the legs in 7, the arms in 6, the submammary region in 3. It may occur at any age except, perhaps, infants (Wilson mentions a case aged 4 years) and in old age. It is much more common in females than males, and is due to "a weakened trophic or nutritive power, and is a consequence of nutritive debility." It occurs in individuals of weakly constitution, but may follow any debility, especially such as in women is associated with irregularities of menstruation, and pregnancy and lactation.

Diagnosis.—*Morphœa nigra* may be easily distinguished from leucoderma by the textural changes. When occurring on the forehead and extending in the hair causing shedding of latter, it has been confounded with alopecia areata. In anæsthetic leprosy the patches never present the curious wax-like condensation or infiltration of the skin, and the history

of the patch is different. It is exceedingly difficult, if not impossible, to distinguish many forms of morphea and scleroderma, and it is held in England that morphea is only a peculiar circumscribed form of scleroderma; that the former may pass into the latter condition, and that clinical experience shows that the two forms are connected by a complete series of cases. In America this view is not so generally held (*vide Scleroderma*).

Treatment.—The disease is essentially a very chronic one. "Slightly more than half the cases are curable," says Wilson, but we have obtained rather more favorable results. The patches may spontaneously resolve, but the cure is generally very slowly brought about. Some cases get well and relapse, and in others the patches rapidly get more and more numerous in spite of all treatment until the body is covered. We advocate the administration of cod-liver oil, preparations of iron, quinine, nux vomica, phosphoric acid, the mineral acids, etc. Locally we do nothing, but Wilson advocates stimulants, such as aconite liniment, bichloride of mercury in almond emulsion, cantharides, etc., whilst Bulkley likes a mild mercurial ointment.

Nails are subject to a variety of diseased conditions. The *clubbing* and *striation*, as an effect of exhausting illness such as heart disease and phthisis, are well known, and also the transverse *notching* indicating the cessation of growth in the part during acute illness. The nails are ill-formed, and rendered opaque and brittle, and possibly thickened, in psoriasis, pityriasis rubra, lichen planus, and sometimes in ichthyosis. They are likewise stunted, and more or less atrophied in some cases of syphilis, and very frequently in those who are weak and out of health. The nail-bed, or matrix, often gets inflamed, with pain, heat, swelling, and suppuration, occasioning perhaps the loss of the nail. This is called *onychia*, and it may be syphilitic,

strumous, or erysipelatous in origin. Lastly, the nails may be thickened and rendered brittle, and raised from their bed by the attack of fungi, and then the disease is known as *onychomycosis*.

A few words may be added as regards the diagnosis of these several conditions. In *psoriasis* of the nails, all or most of the nails, of the hands, and perhaps the feet, are affected. They become at first speckled, then opaque, uneven, dull, and brittle, and the free edge splits up into several layers. The clue to the nature of the disease is almost invariably given by the existence of psoriasis about the body, and one method of treatment for the nail and surface disease may be followed out. *Onychomycosis* mostly occurs together with some form of tinea of the head or body. It may arise by a tinea circinata travelling from the finger to the nail, or the nail alone may be affected in those who have been attending to ringworm cases. No psoriasis can be found, moreover, on the body in these cases. The nail becomes opaque and brittle about the base and sides; then it thickens, is loosened away from its bed, and breaks up into layers. Generally in onychomycosis—and this is a very important point—only one nail is affected, and more rarely two, and only exceptionally more than that. The nails of the feet are healthy, or, in other words, onychomycosis only attacks the nails of the hand. When scrapings of the nail are examined, fungous elements will be detected. The treatment consists in soaking the nail in a sulphurous acid lotion (one part to three or four of water) constantly, and applying acetic acid every day or every other day, but short of producing irritation. *Syphilitic disease* of the nails may consist in general atrophy or indolent inflammation. In the latter condition the parts at the base of the nail become painful, swollen, and red; suppuration follows, and unhealthy ulceration, with loosening and perhaps loss of the nail. Several fingers may be affected at one time. The diagnosis is rendered clear by the concomitance of other evidences of syphi-

lis in the individual. The treatment consists in the application of black-wash externally and anti-syphilitic remedies internally. *Onychia*, when simple, is known by its acute onset and course, and the entire absence of syphilitic or strumous symptoms. The treatment is that of a sharp local inflammation; nitrate of lead ointment is highly recommended for the disease.

Pediculi, *see* Phthiriasis.

Peliosis Rheumatica, *see* Purpura.

Pemphigus is a disease of very definite features, and needs no lengthened description. It is characterized by the occurrence of oval bladders or bullæ, varying in size from a split pea to a pigeon's egg. These bullæ are *primary* formations. Each bulla contains at first, and is distended by, a semi-transparent fluid; soon, however, the fluid gets opaque, and the bulla becomes flaccid and dries up after a few days, leaving a slight scab, or giving rise to a superficially excoriated surface, but no scars are left behind. The disease runs, as the general rule, a slow and chronic course, being prolonged by the development of successive crops of bullæ. The disease, however, may be acute and pretty general, but in our experience the pemphigus is then connected with the development of a septicæmia or pyæmia, and in this case the skin trouble sinks into insignificance beside the graver general condition, but the skin eruption presents all the characters of a freely disseminated pemphigus, hemorrhagic effusion into the bullæ being a but infrequent accident. However, in the great majority of cases, the disease is as stated, chronic and indolent.

There are two main aspects of pemphigus, viz., *P. vulgaris* and *P. foliaceus*.

Pemphigus Vulgaris.—It may consist of a single bulla, which heals, to be replaced by another and another,

generally about the ankle or the hand. This is sometimes called *P. solitarius*, an unnecessary refinement. Usually there are a number of bullæ scattered over a limb, on the abdomen, or indeed any part of the surface, except the scalp. The bullæ are of varying size, oval or round, and in different stages in any given case. Here is a bulla, here a slight crusted spot, and there a stain. Bullæ are attended perhaps by a little burning or itching, and may be a little painful at times, but they are not surrounded, as the rule, by any decided inflammatory areola. They may cluster or coalesce. They prolong the disease by their successive outbreak, each crop lasting a few days only. They may appear on the mucous surface also. The general health is not specifically disordered, except in the young and feeble, who become irritable, feverish, and weak.

Occasionally there is intense irritation, and a pruriginous state of the skin complicates the pemphigus, which has this peculiarity, that, although it may begin by large, yet has also in this variety small, bullæ. This is termed *P. pruriginosis* by some, but we think it a phase of *hydroa* (which see).

Pemphigus Foliaceus is a rare condition, first described by Cazenave, but is a well-marked clinical variety. It attacks the body generally, beginning in one spot, and gradually invading the entire surface. The bullæ are more or less abortive, and of course flaccid, and give rise to flaky incrustations, like thin, pie-crust flakes, covering the surface of the body, and presenting the aspect of a crusted eczema, only that bullæ are detected. It is said to begin on the front of the chest. There are exceptions to this; we have seen it begin on the back, and in one case just like ordinary pemphigus of the limbs, with well-marked typical bullæ. We have seen aortitis with it. The general condition is one of extreme prostration, and patients are specially worn out and exhausted by the irritation, burning, and free discharge that accompany the disease.

Diagnosis.—Syphilitic pemphigus attacks especially the soles of the feet and palms of the hands of the newly born, and is associated with syphilitic cachexia and other evidence of syphilis. Bullæ are secondarily formed in eczema of the hand, dysidrosis, and other diseases, but they are recognized to be not *primary* and independent, as are those of pemphigus vulgaris.

Treatment.—Local remedies play a subordinate part in the disease. The bullæ may be punctured, and the affected parts treated with some soothing lotion containing oxide of zinc or Goulard's water with carbolic acid, or the surface may be dusted over with fuller's earth or some dusting powder, and when there are excoriations a mild, lead ointment may be used. In very severe cases, slight water packing or the continuous bath is recommended. But the internal treatment is of most good. Every possible source of debility must be carefully inquired after; worry and excitement are to be avoided. The want of proper food, of fresh air, and of proper rest should be remedied, and the patient should be put upon a free and liberal course of quinine if there is any pyrexia or malarial condition present, though arsenic is preferred by many. In the foliaceous variety the patient should be dealt with as suffering from a rapidly exhausting disease. In children we have seen chemical food (solution of the hypophosphites of lime, iron, soda, and potassa) and cod-liver oil of great benefit.

Phthiriasis, formerly called *prurigo senilis*, is caused by the attack of the *pediculus vestimenti*. The disease consists, as we first pointed out some years ago, in the presence of certain peculiar hemorrhagic specks, together with the phenomena of secondary irritation induced by the pediculi and by scratching. It occurs chiefly in the aged, but it also is met with amongst younger persons, who are uncleanly. The pediculi attack the regions of the clavicles and neck,

first of all; and it is there the first evidences of the disease must be traced. Pediculi do not bite as imagined. The characteristic lesion is easily overlooked. The hemorrhagic mark is not raised like a scratched follicle, nor is it irregular like an excoriation, but it is formed by the opening of a follicle dilated by the proboscis of the pediculis, showing in its centre a dried speck of blood which has welled up from its deeper part. It is a circular, cup-shaped *depression* about the size of the blunt point of an ordinary pin, and has an *even* and well-marked circumference. The pediculus inserts the proboscis into a pore, which it distends, and as the proboscis is withdrawn the blood wells up to fill the follicle. The irritation and scratching induce the development of papules, whose apices, when scratched off, become covered by scales of dried blood (pruriginous, as it is called). This condition, together with ecthymatous pustules, excoriations from scratching, wheals, etc., constitute the secondary eruption of phthiriasis. At first the mischief is localized to the neck and shoulders, but presently it spreads over the back, abdomen, buttocks, etc.

Treatment.—It consists in giving warm baths, smearing the skin with some parasiticide, as (114), (115), (124), to keep away the pediculi, and in carefully baking the clothes worn by the patients at a temperature of 220° F.

Pigment Increase.—*Moles; Lentigo; Chloasma; Melasma.*—These terms include the states of increase of pigment in the skin which are unassociated with any textural alteration, and in the discussion of the subject it will be convenient to follow Hebra, who has deduced something like order from the chaos of terms formerly in use.

Moles are the pigmented areas of congenital origin. Those which are met with independently of any structural skin change are known as *nævus spilus*, and those associated with a slight amount of warty growth as *nævus verrucosa*. For other kinds of moles see the section on *nævi*.

Lentigo.—Under this term is included “all those pigmentary changes which are usually met with on the face and on the arms, but also on other parts of the surface of the skin, in the form of spots of the size of a pin’s head or lentil, and of a yellow, or yellowish-brown color.” They are met with in children under the age of 6 to 8 years, whether they are much exposed to the sun or not, and they disappear almost invariably after 40. The brown spots known as ephelides or freckles, so common in red-haired persons, which are popularly supposed to be present only in the summer, really exist, as Hebra has shown, also in the winter, though in cold weather they are usually of a much fainter color.

Chloasma.—This term has been widely used to denote also the parasitic disease now known as *tinea versicolor*, and the student is warned not to be confused by this in his reading. The so-called “liver spots” which come under this heading were named so from their resemblance to the color of the liver. *Chloasma* consists of yellowish or yellowish-brown patches, as distinguished from the spots above described, of various shapes, sharply defined, smooth, not detaching scales on scratching, and occurring anywhere on the body. Such pigmentation may result from any prolonged irritation of the skin, from pressure, injury, blisters, and in uncovered parts from exposure to solar heat. We may here call attention to an unusual state of pigmentation occurring in lousy people, which is mentioned by Hebra, but specially called attention to by Dr. Greenhow.

Cases of another class are those symptomatic of some states of peculiar physiological activity or organic disease. The *C. uterinum et gravidarum* of females is widely known. It occurs in pregnancy, at the menstrual periods, and in diseased states of the uterus or disorders of its functions, is situated about the nipples, abdomen and face, arching over the forehead pretty symmetrically, and is limited to the child-bearing period.

Apart from this special form there is a class of cases of increased pigmentation due to severe constitutional depression and more extensively diffused. It may follow or accompany severe illness, the cancerous cachexia, pellagra, etc.

Melasma is the term applied when the pigmentation is very dark in color. A remarkable form is that met with in Addison's disease, and it is well to remember that it also occurred in the epidemic in Paris, some years ago, known as acrodynia.

Ætiology.—This may be ascribed to faulty innervation, but very frequently it must be considered as simply a "freak of nature."

Treatment.—When the cause lies in any apparent disordered state of the body, the object must be of course to rectify this, but, in the many slighter cases where the "blemish" is of a purely local nature, the removal of the pigmentation is not often very satisfactory, and hence the excuse for the multitude of cosmetics, etc., professing their removal. As the pigment molecules are situated in the lower layers of epidermic cells, we may dissolve or otherwise destroy these with the hope that in the new cells the pigment will be diminished, or we may stimulate the part with a view to their absorption. For this purpose lotions of borax, the alkalies, spiritus saponis alkalinus, tincture of iodine, and corrosive sublimate are the proper agents to use.

Hebra gives tincture of iodine painted on every four hours for three days; or spiritus saponis alkalinus (cotton-wool kept applied wet). He also uses the following formulæ:—

- R. Bismuth. subnit.,
Hyd. ammon. chlor., āā ʒij;
Lard, ʒj. M.
- S. To be applied on lint, at least at night.
- R. Hyd. bichlor. gr. ʒ;
Emuls. amygd. amaræ, fʒij. M.
- S. Apply once or twice daily.
- R. Hyd. bichlor. gr. v;
Sp. vin. rect. fʒj. M.
- S. To be quickly applied as a caustic.

Pityriasis consists essentially in an hyper-production and excessive shedding of epithelial cells in the form of small bran-like scales or of flakes, as a *primary* and essential phenomenon. This state is attended with more or less hyperæmia. It must be distinguished from *secondary* desquamation, which follows as a consequence of all disturbances of the cutaneous circulation, or the epithelial formation of new growths and the like. It should be also recognized as different from so-called pityriasis of the scalp (dandruff), which is in reality a seborrhœa. The term pityriasis in the designation pityriasis versicolor, as applied to the vegetable parasitic disease tinea versicolor, is misleading. Simple pityriasis, as above defined, is usually the result of simple hyperæmia induced by irritants, such as cold winds, heat, friction, and is quite an unimportant matter. But there is a second variety, which is a well-marked and severe disease. It receives the name *Pityriasis rubra*. Some think this a phase of eczema; we do not. The disease begins at one particular part of the body as a red scaly spot, and then rapidly spreads so as to speedily involve the whole surface of the body. When the disease is thus fully developed the face looks more or less flushed, and is sometimes covered by minute scales, the scalp is in a similar condition, but the body and limbs show the disease in its most typical features. The skin is intensely red, but the hyperæmia is greatly diminished or disappears under pressure. The skin itself is not thickened by infiltration in the earlier stages of the disease, but only secondarily and exceptionally so in the later stage of chronic cases. The surface also does not weep, as does that of eczema, except again very exceptionally. Upon this reddened skin are disposed oftentimes in layers arranged like the tiles of a house, or more or less irregularly imbricated, thinnish scales of epidermis, loosely adherent to the surface, and varying much in size up to large flakes an inch or more in diameter. These flakes are adherent in part,

but free at one or more points or edges. They readily curl up, and are easily detached, and indeed large quantities are constantly and rapidly shed in some cases, so that two or three handfuls may be collected from the bed in the twenty-four hours, hence the term *Dermatitis exfoliativa* applied to the disease in this aspect. The patient suffers little discomfort except in severe cases, when itching and burning and much stiffness are complained of, finally the disease is allowed to become chronic from want of proper treatment. In many cases it can be conducted through an acute course. Patients are usually much debilitated.

Treatment.—The slighter forms are relieved by internal tonics and the inunction of oil or some slight astringent. *P. rubra* must be treated as a disease consisting in general hyperæmia of the skin due to nerve paresis. The patient must be wrapped in oil, and quinine and cod-liver oil must be given after the free exhibition of diuretics, to relieve the hyperæmic skin. Finally, perchloride of iron will be found very useful as convalescence approaches.

Porriago, a term now obsolete, but formerly applied indiscriminately to any crusted eruption or scaly incrustation, especially about the face or head. It included favus, ring-worm, eczema, etc.

Prickly Heat, or **Lichen Tropicus**, occurs in the tropics mostly, but in a milder form elsewhere in the summer months. It is seen as a minute, red, very itchy, pimply rash, due in part to inflamed sweat follicles and to hyperæmic papillæ, which occur, we hold, secondarily to the other condition. Lichen tropicus attacks the surface of the body, the limbs, and often the face, and is interspersed with sudamina, here and there. The itching is increased by heat, drinking hot liquids, etc. Much difference of opinion exists as to its anatomical seat. To those who are interested in the matter

we commend the clinical observations on the disease contained in the report of Dr. Farquhar and ourselves on endemic skin diseases of hot climates.

Treatment.—This consists in giving diuretics freely: avoiding all stimulants; wearing thin clothing: taking light food: using alkaline baths; and smearing the surface with whiting made into a thin paste, or some simple emollients.

Prurigo must not be confounded with Phthiriasis, which is an eruption due to the attack of body lice. Prurigo is a rare disease, and is characterized by the development of small, hard, pale, or flesh-colored papules, which in their early stage are better felt than seen, accompanied by intolerable itching. The papular rash is *primary* in prurigo, and is not a secondary condition. The papules are due to chronic inflammatory changes in the papillary layer of the derma, and sometimes the deeper stratum of the skin. They occur mostly on the lower limbs, buttocks, lower part of the abdomen, and outer part of the forearms. The disease in its mildest form, when it resembles lichen simplex of chronic character, is termed *P. mitis*, since the papules are small or limited in extent, and the itching is not severe. When the disease is well marked, the papules crowd together in certain situations, and even form small patches, especially on the legs; they are felt under the skin before being clearly discernible to the eye, and the itching or disordered sensation, termed *formication*, is like creeping of ants. To this condition the term *P. formicans* is given. In certain cases where the disease is extensive, and more or less congenital and persistent, it is called *P. agria* or *ferox*. More acute inflammatory changes however supervene, and then more or less supuration occurs in this variety, with glandular enlargements in the groin, whilst the skin feels thickened and indurated in the chronic stage. In England the severer form is not common. The writer has only met with a few cases: and

the disease of milder type has occurred in his experience in those exposed to alternate heat and cold in their occupation, and who have become debilitated.

It is most important to thoroughly understand what is meant by the term *pruriginous*, which is so frequently used. In the first place it is most erroneously applied synonymously with the term *pruritic*. A consequence of pruritis is, that the skin gets scratched and excoriated, and, secondarily, the follicles become hyperæmic, and papules form, which in their turn get scratched and surmounted by a tiny blood crust. (See *Follicular hyperæmia*.) Secondly, primary eruptions of various kinds are *pruritic*, and hence get scratched, and secondary lesions are formed. It is manifest that the term *pruriginous* is out of place as applied to these phases of disease, and should only be used as denoting a distinct primary affection of a special nature.

Treatment.—Locally, to relieve the itching, our resources will often be severely taxed, and recourse must be had to the employment of vapor and alkaline baths, the use of sedative lotions, such as (23), (30), (34), (69), (71), (74), or to such applications as the *lotio picis alkalinus*. Internally, the object should be to improve the general health, and cod-liver oil and arsenic (90 *et seq.*), or (106) will be often found of especial service.

Pruritus, or *itching*, is simply a disorder of sensation, and is an accompaniment of most skin diseases, especially eczema, lichen, prurigo, urticaria, scabies, and phthiriasis. Pruritus however may arise in the skin without any eruption, and then it is usually due to the circulation of some acidity, as bile products, urea, uric acid, etc.; or to some local disorder of the nerves; or it is excited by some local irritant, as for instance, about the rectum by ascarides, about the head and pubes by pediculi, about the body by flannel, friction, or scratching. It must be remembered that the ap-

pearance of the skin is always altered by scratching, which causes follicles and papillæ to become hyperæmic and prominent, their apices get torn off, and a drop of blood sometimes exudes and dries as a speck. This *pruritic rash* is often most erroneously termed prurigo (which see). In old people *pruritus senilis* occurs as an hyperæsthesia consequent upon the general atrophy of the skin; but in such persons the causes mentioned above may also come specially into play.

The following hints relative to the more common causes of itching may be found useful. Itching *increased at night* by the warmth of the bed, with a pimply rash about the front of the arms and the body, is suggestive of scabies, in which case cuniculi are to be looked for. Itching in old people about the shoulders and back, may mean phthiriasis. At the back of the head in children, the evidence of pediculi is often revealed by an abundance of "nits" on the hair. Itching, with eruption about the fork of the thighs, may be due to parasitic disease and intertrigo (*ex.*, eczema marginatum). Itching of capricious character, suddenly coming and going, here and there, especially at night, and without visible eruption in the daytime, is suspicious of urticaria, and the occurrence of "wheals" affords the means of a speedy diagnosis. In the winter time especially, it is not uncommon for the skin in certain persons to be irritable, particularly towards evening, or when the clothes are taken off, and the air obtains access to the skin. The itching in such cases has been termed *pruritus hiemalis*, or winter pruritus, by Dr. Duhring. It occurs in various parts of the body, but more especially about the thighs and legs. In some cases no eruption can be seen, but in others there is decided turgescence and prominence of the hair follicles, enough in degree, perhaps, to constitute lichen pilaris. The disease is supposed to be "neurotic," but it is probably due to inactivity of the perspiratory function in the majority of cases; at the same time there is frequently defective excretion of

nitrogenous matters and bile products, at least in our experience in England. It is not exclusively a winter affection, though most common at that time, because of the inactivity of the skin. Scratching, it must be remembered, may excite lichen, eczema, ecthyma, and the like, whereby the primary disorder may be masked.

Treatment.—A number of remedies for itching occurring in connection with particular diseases, will be found in formulæ (18) to (44), and scattered elsewhere. Starch, borax, or alkaline baths should be administered when the skin is hyperæmic or irritable, and in the early stages of pruritic mischief. In the indolent aspect, or later stages, sulphuret of potassium or mineral acid baths are of decided efficacy, and we have found salicylic acid lotion of great service. As regards internal treatment, this varies with the case. Itching due to the circulation of retained excreta may be relieved by appropriate aperient and alkaline remedies, whilst nervine tonics will be suitable for the “neurotic” itching. In our experience a “gouty” tendency, constipation, rich foods, and the free use of wine, have much to do with a great number of cases of itching of the skin. All parasites, and other local irritants, must be destroyed or removed (*see 209 et seq.*), and flannel especially should not be allowed in contact with the skin in severe pruritus. Further information will be gathered from the special descriptions of the several diseases mentioned herein, with which itching is associated.

Psoriasis consists essentially in an overgrowth of the Malpighian and cuticular layers of the skin, occurring more or less generally and in patchy form, over the surface, in association with hyperæmia and engorgement of the vessels in the more superficial strata of the corium, and particularly its papillary portions in the affected spots. It has generally been held that the hypertrophy of the rete and horny layers is dependent upon the hyperæmia, but we have been singu-

lar in maintaining for several years, in class and in our writings, the view that the changes in psoriasis originate, as regards the skin, primarily, or immediately, in the cell elements of the cuticle themselves. We were led to this conclusion by clinical observation, and an examination of the data afforded by the microscopic observations of Neumann especially; interpreting these latter, however, in a different sense from Neumann himself, whose view is in accord with commonly received opinion. Recently Dr. Robinson, of New York, has published an admirable paper on the histology of psoriasis, in which, as the result of researches he has made, he comes to the conclusion so long held by ourselves. We may add that we have confirmed, during a recent investigation, the correctness in the main of Dr. Robinson's histological data.

In psoriasis as a consequence of the excessive growth of the cuticular layer of the skin, the surface of the psoriasis assumes a marked scaly appearance due to the accumulation and heaping together of the abnormal quantity of epithelial scales. And these scales have this characteristic, that they are dry and of very silvery aspect in the mass, which mostly enables the disease to be at once recognized. Psoriasis, therefore, is made up of elevated points or patches of hyperæmic cutis, upon which are seated masses of silvery-white, dry scales. If these masses of scales are forcibly removed there is this peculiarity also observed, that the engorged vessels appear as little red points studding the surface, which is at once clearly seen when a lens is used, for generally the removal of the scales by the fingers tears open the vessels and they appear as little bleeding points.

The disease may be acute or chronic, generally the latter. It may be hereditary. It is often general, but usually localized to several regions of the body. The chief seats of psoriasis are the elbows and knees and the head, but the body on both aspects and the limbs are frequently affected

also. It attacks persons of all ages, but there is this remarkable distinction to be observed, that whereas as the rule in the young it is associated with nutritive weakness and even the lymphatic temperament, in the elderly it often occurs in those of gouty diathesis, and hence assumes a more inflammatory aspect. There are exceptions in the case of the young who inherit a gouty constitution. All conditions of debility favor the occurrence of psoriasis, especially about the time of puberty. But many persons attacked are apparently healthy and strong.

A number of varieties of psoriasis have been made, but they are mostly only different degrees of intensity of the same essential condition—*stages*, not *varieties*—and several of these stages may be present in one and the same person. The disease begins by the development of small reddish or scaly points or spots, scattered here and there over a region, or the surface. This is termed *psoriasis punctata*. These spots gradually enlarge and then look like drops of mortar, hence the term *P. guttata*. Soon the places acquire the size of a sixpence or a shilling. They are mostly round, and being like pieces of money, the stage is termed *P. nummularis*. These conditions may coexist in varying proportions. In some cases large patches are formed by the coalescence of the smaller or the continuous enlargement of original spots, so that a great extent of surface is covered, but at the same time smaller spots of the *guttate* or *punctate* character are perhaps present. This well-developed aspect is called *P. vulgaris*. Should patches take on a serpentine form the term *P. gyrata* is used, and if the affection is very chronic *P. inveterata*. Lastly, if the crusting is freer than usual and assumes a conical shape, the name *P. rupioides* is applied, the epithelial elements being in this case mixed with pus. This latter condition is dependent on a strumous habit. An important local phase is *P. palmaris*, likely to be confounded with syphilitic disease; but the former is com-

monly a part of a more general affection, and it does not begin nor is it limited to the palm of the hand, as is the syphilitic disease as the rule.

Diagnosis.—This is readily made in the great bulk of cases; the silvery heaped-up scales, seated upon a hyperæmic cutis, which readily bleeds on their removal, and the special affection of the elbows and knee-joints are very characteristic of the disease. These features, together with the absence of any history of a “weeping stage,” distinguish it from eczema, which in its squamous stage only resembles psoriasis. Seborrhœa of the scalp simulates psoriasis, but it is made up of soft, easily removable fatty plates. Squamous syphilitic eruption of the skin is distinguished from psoriasis by the presence of concomitant evidences of syphilis elsewhere, by the fine, few, adherent scales on the patches, which lack the silvery scales of simple psoriasis, by the absence of the disease from the elbows and knees, and the presence of an *infiltrated* cutis beneath the scales which does not show the bleeding points on removal of the scales, as in simple psoriasis, etc.

Treatment.—The treatment of psoriasis, if given in proper detail, would occupy considerable space. We can only indicate the main points of the matter here. In acute cases in young people, if the skin be hyperæmic, in the early stage diuretics, in our opinion, are very valuable, together with alkaline baths daily, or every other night, with free inunction of oil afterwards. The same line of procedure applies to acute psoriasis, or to psoriasis of an inflammatory character in a chronic state in the adult; but it is important to deal under these circumstances, with any gouty tendency or any loaded state of system due to torpid excretion which may be present, and those “modifying influences” so commonly in operation, and which are mentioned under the head of general principles of therapeutics, at the end of Part I. of this book, should be carefully sought out and dealt with. We

may say by way of summary on this point, that whenever psoriasis is acute or hyperæmic, the action of the bowels and kidneys should be for the time augmented with the view of diminishing such hyperæmia.

But in ordinary indolent, typical, or chronic conditions tonics are needed, and certain local applications for the removal of scales and for checking of the hyperplastic growth of the cuticular cells. As regards tonics it may be said that children do best on cod-liver oil, quinine, and iron, though arsenic is indicated if the scales be very plentiful and silvery (see formulæ 90, 92, 106, 107), *which must, however, be properly proportioned in dose to the age of the patient*. Locally alkaline baths may be used with the inunction of oil as long as hyperæmia is decided; subsequently mild tar applications as (70), or an ointment composed of five grains of white precipitate and a like quantity of nitric oxide of mercury, carefully levigated and mixed up with an ounce of lard and a little scent, may be firmly rubbed into the spots night and morning. In adults the general condition of health must be carefully estimated and dealt with accordingly; but yet, in the weakest as well as in the strongest, the necessity of a due performance of the functions of excretion, the prescription of appropriate tonics, and the regulation of the diet in view of a gouty tendency, a scrofulous diathesis, under-feeding, over-nursing, and the like, are to be scrupulously observed. We think arsenic advisable, if at all, in indolent cases, with free, well-marked, silvery scalliness (see formulæ 90 *et seq.*, and 106 *et seq.*). In anæmic women, iron is of essential importance. In the leuco-phlegmatic, and in women with leucorrhœa, the mineral acids, iron, and bitters, with cod-liver oil, have done us best service. Phosphorus sometimes does good.

Locally, the first step is to remove the scales of psoriasis. Tepid baths act efficiently in this respect in a large number of cases. They may be used every, or every other, night, and

give great comfort. Two ounces of bicarbonate of soda or borax may be added to help the loosening of the scales from the surface. With baths it is usual to employ some tarry preparation. Several formulæ containing tar are numbered 68, 69, 70, and 71. They should be applied cautiously to a small region at the outset, for, often where they *a priori* might be thought to agree, they do positive harm. When borne well they should be, as Duhring most justly points out, "used in small quantities and effectually worked into the skin." Hebra's favorite preparation is a mixture of equal parts of liquid pitch, alcohol, and *sapo viridis*, but it is often too irritating for English skins, except in the case of *very* indolent patches. Other good remedies are mercurial preparations, the citrine ointment diluted with one or several parts of lard or vaseline. The one of most general use is composed of five grains of white and five of red "precipitate," and an ounce of lard. It is very efficacious in psoriasis of the scalp. To obstinate patches of limited extent we often apply the strong mercurial ("blue") ointment, diluted with six times its quantity of lard.

Lastly, we must mention the use of *crysophanic acid* in psoriasis, in the proportion of from ten to forty grains to an ounce of lard. This ointment often rapidly removes psoriasis for a time, but in many cases the disease soon returns, and the remedy has its drawbacks in that it stains some people's skin a mahogany color, or excites so much irritation that patients get frightened and change their doctor. The remedy may be used in moderate strength to a few patches, and then the area of its application and the strength of the preparation may be gradually increased, but a few rubbings for a minute or two into a given spot or patch soon removes the disease, which is replaced by a whitish surface, the circumference being stained dark brown. We have always employed the remedy with considerable caution because of the annoyance caused to some patients.

Purpura is characterized by extravasation of blood into the cutis and sometimes internal parts of the body, and is usually attended by constitutional disturbance. The term does not include the extravasation due to mechanical causes, nor the occasional *secondary* occurrence of hemorrhage in lesions of the skin, such as *Herpes*, *Pemphigus*, *Urticaria*, etc., which especially occur in old and debilitated persons, though such names as *Purpura urticans*, *Purpura hydroa*, etc., have been applied, nor the hemorrhagic eruptions or purpuric conditions associated with malignant forms of the acute specific diseases and with scurvy. The spots of primary purpura are at first of a deep red or scarlet color, and as they fade away they exhibit the usual changes presented during the absorption of blood in the skin. Three forms of purpura are usually described.

In *Purpura simplex* the extravasations are of infinite variety, though attaining a large size. The eruption is symmetrically arranged, general, though especially developed on the legs, it is often sudden, and usually unattended by constitutional disturbance, though debility is present. In *Purpura hemorrhagica* the conditions are altogether of greater gravity both as regards the number, of extent of the patches, of effusion, and the serious state of the patient; hemorrhages from the mucous surfaces being common. These purpuric conditions must be carefully distinguished from scurvy, which occurs principally amongst seamen who have been subjected to a deprivation of fresh food, and especially fresh vegetables. In scurvy also there are often inflammations and ulcerations about the legs and gums, and considerable constitutional disturbance preceding the eruption.

There is a third variety of purpura which may be discussed here, though it has been variously considered as a rheumatic affection, a purpura, a scurvy, and an erythema nodosum. It is complicated with hemorrhages and joint affection. It is known as *Peliosis rheumatica* or *Rheumatic*

purpura. The symptoms consist in the onset of some fever with pains in the joints, and the subsequent extravasation of blood in spots, after which the joint pains subside. Dr. Kinnicott considers the disease as distinct from erythema and purpura, whilst Dr. Liveing, who has also devoted especial attention to the affection, considers it to be nothing more than erythema nodosum, *E. tuberosum*, etc., in which severe joint complications are known to occur, accompanied by an unusual degree of hemorrhage into the patches.

Treatment.—The true forms of purpura require rest, careful dieting, and the administration of the mineral acids, quinine, perchloride of iron, turpentine (100), gallic acid, ergot, etc. Many cases, however, will be found to yield only with great difficulty.

. **Ringworm**, *see* Tinea.

Rodent Cancer, or **Ulcer**, is in Europe generally not specially distinguished from epithelioma, but in England it has been regarded as a distinct form of cancer, though closely allied to epithelioma on account of its very slow growth, its appearance, and the non-infiltration of the lymphatic glands. We have, however, recently demonstrated its true origin from the epithelial cells of the sheaths of the hairs and its essentially epitheliomatous nature. It is the least malignant form of cancer, and rarely begins before the age of fifty, though it has been met with as early as the age of twenty-five. It may commence in a pre-existent mole, or as a slightly crusted minute excoriation, probably made by scratching, or, more often, as a pale, solitary, indolent tubercle, with a distinct, slightly rolled, well-defined edge, somewhere in the upper two-thirds of the face, and especially about the side of the nose. After two or three or several years, slow, and comparatively painless enlargement, the spot ulcerates in the centre, and the ulceration unequally follows the

extending edge, so that there is a characteristic dry, glossy ulcer bounded by hard, rolled, sinuous or gnawed-looking edges, which are not undermined, as in ordinary cases of epithelioma. There is little if any cachexia, and the lymphatic glands, in relation with the seat of the ulcer, are never infiltrated, as in the ordinary forms of epithelioma, though they may be irritated and temporarily enlarged. The disease progresses perhaps for four, five, or more years without attaining the size of a sixpence, but its progress is slowly continuous, and eventually the ulceration extends through every texture, even perhaps to the brain, leaving a wide hideous cavern, with precipitous sides, sharply separated from the healthy skin around.

Treatment.—Cauterization may be successful in the earliest stages of the disease, and in certain slight cases, but, after an extended experience of patients with rodent ulcer, we are convinced that the right plan is to excise freely, and to cauterize the surgical wound with the actual cautery or by the application of chloride of zinc paste. The line of incision requires to be made with judgment, so that it may really run sufficiently wide of all disease.

Roseola is a hyperæmia of a rosy hue, either symptomatic, and then part of certain acute febrile disease, as rheumatism, vaccinia, cholera, etc.; or idiopathic, as seen mostly in children during change of season (*R. infantilis*), and in connection with slightest stomach derangement. It may be general and resemble measles, but there are no true catarrhal symptoms; the rash is not crescentic in character, and is more rosy than that of measles. Though it may be distributed more or less wholly over the body, still it is decidedly patchy in character. It may occur in rosy circles and rings (*R. annulata*), especially about the limbs, and in the autumn or summer (*R. autumnalis* and *R. æstiva*).

Treatment.—In the idiopathic forms salines and laxatives should be exhibited and some simple ointment used.

Rupia.—In this eruption small flattish bullæ are developed, with contents which are at first fairly clear, but quickly assume the aspect of a mixture of blood and pus. The bullæ dry into dark thick scabs, which hide unhealthy ulceration. The crusts increase by additional discharge, which “dries on,” as it were, in layers from below as the ulceration increases. These crusts are consequently conical, stratified, dark, and adherent, and are termed “cockle-shaped” crusts. They are in fact diagnostic of rupia. Should the crusts be moderate in size the disease is termed *R. simplex*; if large and prominent, *R. prominens*; if the ulceration is excessive and phagedænic, *R. escharotica*. The disease is *always syphilitic*.

Treatment.—This should be as for the tertiary syphilis, *see* (84 *et seq.*). The ulcers may be cleansed by iodide of starch, and dressed with black wash or (61), (81), (82), or (83).

Scabies or Itch is caused by the burrowing in the skin of an insect called the *acarus scabiei*. This burrowing excites much itching and some hyperæmic rash; the patient scratches for relief and so occasions much of the rash that is seen in scabies. Hence scabies consists of an eruption due to the presence of acari in their burrows: together with a *secondary rash*, the result of the irritation of the skin. The appearance presented by the acarus in its burrow, which is characteristic of scabies, is as follows: Where the acarus enters a vesicle forms, and the animal's course is traced by a slightly raised, straight, or tortuous line (*cuniculus*) from one to many lines in length, at the end of which the presence of the imbedded intruder is marked generally as an opaque spot;

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it may, however, be dark from dirt. The furrow or cuniculus itself becomes discolored by dirt, and then has a dark tint with darker dots along its course, probably, in part, the excreta of the acarus. Now these furrows are mostly seen in the adult, in the interdigits and about the wrists in the early stage of the disease, but subsequently about the penis at its upper line and more rarely other parts of the front of the body below the nipple level. In children the buttocks and feet may alone be the seat of scabies. Of course, the furrows lose their characteristic appearance after a good scratching, as they are torn open and the acarus frequently dislodged, a very common appearance then is a ragged line of torn cuticle indicative of the opened cuniculus and starting away from a spot, marked by indications of the shrivelled vesicle which formed at the place where the itch insect began to burrow, and observed to end sometimes in a small circular, little depression, bounded by edges of ragged cuticle, from whence the acarus was dislodged by the fingers in scratching. If patients are cachectic both the vesicle and the furrow may suppurate, as in so-called *pustular scabies*. The "secondary rash" consists of hyperæmic follicles and papillæ forming papules, of ecthymatous pustules excited by scratching, and sometimes of eczema, and urticaria. The results of irritation are seen in early scabies, in the adult on the front of the forearms and about the wrists; in chronic scabies on the front of the belly and on the upper part in front and inner-surface of the thighs; in children about the lower limbs, buttocks, and abdomen. Scabies is accompanied by marked itching, which is always worse at night, and several members of a family are often the subjects of attack at the same time. Cuniculi are absolutely diagnostic, but if these cannot be detected, itching at night in persons who have a pimply rash in the interdigits or forearms or upper line of the penis is very suspicious, and much more so if several persons in the same family are similarly affected.

Scabies in Private Practice.—It is important to remark that scabies often differs very much in aspect, according as it occurs in hospital or in private practice. Amongst the poor, and especially the uncleanly, the burrowings of the acari in the skin are attended with the formation of papules, vesicles, pustules, wheals, etc., in abundance. But amongst the well-to-do, and particularly those who observe great cleanliness, the ordinary results of the irritation produced by the acari may be almost, if not entirely, absent. So that if a student were to be guided by the ordinary descriptions given in books of scabies, he would certainly not be able to diagnose the scabies present. The disease would not correspond in description to papular, pustular, or vesicular scabies, and yet true scabies might be present. We have seen several cases lately in which patients complained of itching intensified at night in different parts of the body, and in whose skin nothing could be detected but a few cuniculi about the hands, or the penis, and an apology for a vesicle here and there. We have seen a multitude of acarian furrows about the hands, and other parts, in a case of scabies, and nothing else. In other cases we have observed just a few very fine, delicate, pale, flesh-colored papules, the result of irritation set up by acari present in the skin, and nothing more, and these, which were lichenous papules, were difficult to make out. In all cases in which a patient complains of itching aggravated at night, even though there be none of the ordinary evidences of scabies present, yet a diligent and active search for cuniculi should be made about the hands and penis. We have known patients treated with powerful internal remedies for "prurigo," lichen, and the like for weeks, whilst scabies, which existed, was wholly unsuspected because there were no papules and pustules present. Papules, pustules, and vesicles are indeed *accidental* accompaniments of scabies. Scabies should be looked upon as consisting essentially of the acari in their furrows (cuniculi)—*i. e.*, the real scabies, and

the phenomena of irritation (papules, pustules, etc.) super-added, which, under certain circumstances, may be entirely absent.

Two or three cases of scabies limited to the penis have recently come under our notice. In all of the cases careful search detected cuniculi. In two, suppurating buboes were produced by the irritation, and the disease was thought to be syphilitic. The diagnosis was rendered easy by the absence of any decided induration about the scabies spots, their vesico-pustular origin, pruritus intensified at night, the presence of cuniculi, and the absence of any concomitant evidence of syphilis.

Treatment.—The majority of cases are cured by a free inunction night and morning of (114) or (120) for three nights and mornings. The patient must thoroughly wash himself, and if free from itching on the fourth night may be regarded as well. It is important not to overdo the sulphur inunction, but discontinue it after a day or two, for it often sets up in itself irritation, and the continuance or increase of itching is taken for an aggravation of the disease. After three days' treatment the remedy may be lightly applied to any solitary vesicles that make their appearance. If any parts feel hot and tender (74) should be used to soothe. In chronic scabies it may be necessary to make freer and more potent applications (110 *et seq.*). Often the free use of storax ointment will be found most effectual; and ointments of iodide of potassium and carbolic acid are also efficacious.

Scleroderma is known by the names of Sclerema, Scleriosis or Hide-Bound disease.

This affection is usually considered under two heads, viz., *S. adultorum*, or true Scleroderma, and what is probably a totally distinct affection, the so-called *Sclerema neonatorum*.

Scleroderma adultorum is a rare affection, characterized clinically by a shining, tense, inelastic, shrunken condition

of the skin, and extending usually over a considerable area of the body, and limiting the movements of the regions affected. In consequence of this condensation and shrinking, by which the underlying parts, over which, however, the skin is movable, are bound down and rendered immobile, the muscles, and even the bones may eventually waste, and whilst distortion may occur about certain apertures, as, for instance, those on the face, the parts about them being dragged out of normal position as by an extensive cicatrix. The aspect presented is very striking, and has been likened to a petrified, or frozen limb, or a corpse. When the change extends over nearly the whole body the patient becomes a helpless cripple, and the functions of deglutition and respiration may even be interfered with. The disease is usually very symmetrical, and may begin in one or more parts of the body; the change is usually very extensive, and the diseased skin has an ill-defined border, with or without a velvet fringe, and passes insensibly into the healthy skin. Moreover, although the skin is dense and hard, it never appears thickened, or as if infiltrated with a new deposit in the exact form seen in *Morphœa*, but thin and shrunken. It is necessary to pay attention specially to these points, because they are insisted on by such observers as Bulkley and Van Harlingen, who deny that *Morphœa* is a circumscribed form of this affection (*vide Morphœa*), as held by Fagge, Tilbury Fox, Hutchinson, and Liveing, in England, and by Kaposi.

Scleroderma commences more commonly at the back of the neck, and thence spreads to the face and trunk and even the limbs, or it may begin in the limbs and especially the hands and arms. It is far more common in females, and, though occurring at any age, from childhood upwards, is generally met with in adult or middle life. The affected parts usually feel cold, and are lower in temperature, and where the condensation is greatest the functions of the sudoriparous and sebaceous glands, of hair formation, and of

the nerves of sensation, are interfered with, just as in Morphea. So, too, irregularities of pigmentation occur frequently, and white patches may form, or more or less densely pigmented ones. The general health is often apparently good, and the patient may cease work simply from the increasing difficulty of motion in the parts; or the health may be manifestly bad, especially from rheumatism or heart disease, and there is frequently considerable anæmia. Apart from these influences, there is very little history of direct causation to be obtained, except, perhaps, a chill, exposure, or the sudden cessation of the menses. The onset may be pretty acute, but is nearly always very chronic. There is no febrile movement ushering in the disease, and no evidence of any inflammatory action, but there may be some burning and stinging pains, and disturbances of pigmentation. As secondary effects, the constringing skin may cause some œdema¹ and even perhaps gangrene of the tips of the fingers and toes; and further, the prominent knuckles, etc., may also become ill-nourished and ulcerated. In some of the records it is stated that the general health throughout was unaffected, but in the cases we have met with the general debility was great, and the functions of the stomach, etc., were much impaired. Indeed, Dr. John Harley regards the skin changes as a part only of a general affection of the sympathetic system of nerves. The course of the affection is very chronic, but it tends to get well after some years. Some cases end fatally, but usually from intercurrent disease, such as pneumonia, heart disease, phthisis, and Bright's disease.

Pathology.—A good many microscopical examinations have been made of sclerodermatous tissues, from which it appears that the epidermis is unaffected, but the cutis vera has its white fibrous and elastic tissues much increased in amount,

¹ Some observers have described also a primary œdematous or brawny condition.

or at any rate the bundles are very densely packed in the corium. The fat cells become atrophied, and, in the subcutaneous tissue, the fibrous elements become increased, and in well-marked regions of the disease the whole becomes welded into one dense felt. Kaposi¹ found the bloodvessels diminished in calibre, but here and there the perivascular sheaths distended with lymph corpuscles. He considers the disease as due to a generally abnormal state of the nutritive processes, which induces thickening and stagnation of the lymph, and consequent firm rigid infiltration of the cutis, and the subsequent overgrowth and shrinking of the connective tissue.

Differential Diagnosis.—There are few conditions that could possibly be mistaken for Scleroderma by those who have seen the disease, but it is necessary where œdema exists to distinguish it from conditions induced by the latter, and from the brawny induration of diffused cancer and elephantiasis arabum. In the very young especial care must be used to discriminate it from the so-called Sclerema neonatorum.

Treatment.—We have always carried out the administration of cod-liver oil, iron, mineral acids, phosphoric acid, nux vomica, and plenty of light nourishing diet, but it cannot be said that the immediate influence of this is very perceptible. Partial good effects have been obtained from electricity.

Scrofuloderma.—This disease must be carefully distinguished from lupus, though there may be some difficulty when the latter occurs in a scrofulous subject. It commences as indolent, painless, livid tubercles that very slowly soften up and give place to foul, ragged, unhealthy ulcers with pallid granulations, free secretion, and often much crusting. Occa-

¹ Syd. Soc. Trans., p. 123.

sionally the ulceration is very superficial, and creeps along the surface. This is the form which usually results from the slow breaking down of chronically inflamed and strumous glands. Marked scrofulous features will be recognized in this disease in the family history, the physiognomy, the chronic glandular inflammation, the strumous affection of the eyes or ears, and the possible coincident disease of the spine or joints.

Treatment.—*Internally*, this consists in endeavoring to counteract the strumous habit by giving cod-liver oil or some equivalent, the iodide or phosphate of iron, quinine, or the sulphide or chloride of calcium, and good food in variety. *Locally*, the sores must be cleansed by such applications as iodoform or the iodide of starch paste, and the pus production may require checking by a mild mercurial ointment. Later, the sore may require a more stimulating ointment or plaster, of which the mercurial preparations are the more suitable.

Seborrhœa.—This consists in an excessive secretion of sebum. The disease attacks the scalp and the face chiefly, but may occur on other parts of the body. It is usually localized to one region, such as the scalp or the nose, but not necessarily. In the newly born it may be pretty general, forming a fatty layer over the surface, a modification or remnant of which is seen in the caked incrustation that forms on the scalp of young infants. Seborrhœa may be slight and temporary, or obstinate and chronic. Patients affected by it are generally of lymphatic temperament and weak. Seborrhœa is not usually accompanied by any local symptoms, except those due immediately to the presence or excess of sebum, but there may be decided heat, hyperæmia, and swelling as about the nose and cheeks. There is always itching. The actual sebaceous secretion varies in aspect. It may be more or less soft, so that the skin of the affected part is *oily*;

this is termed *S. oleosa*; or it may dry into fatty plates, consisting of dirty white flat scales that feel greasy, and are easily detached, exposing a very slightly reddened and non-excoriated skin, in which the sebaceous glands are more distinct than usual. This is the common form of seborrhœa. It is termed *S. sicca*, and constitutes what is termed "dandriff" or "scurf" in the head. Thirdly, the fatty secretion may take the form of little plugs distending the orifices of the glands, and then the skin feels harsh like a file (*S. cornea*). The seats of seborrhœa are especially the scalp and the face. It is liable to be confounded with eczema, but in seborrhœa, although the skin is reddened, there is no breach of surface as is seen when the scaliness and crusting are removed. The follicles are seen also to be more patent than usual, and the incrustation is also soft and greasy, and not the result of the drying of "discharge."

Treatment.—It is requisite to give tonics and arsenic, as (90), (93), (94), (103): locally to get off the crusts by oily inunction, and to apply astringents, as (14), (25), (40), (51), (60), (73).

Strophulus or Red Gum.—This term has been applied to many different eruptions, consisting of soft red papules in infants; in one case, to hyperæmic papillæ, in another, to hyperæmic sweat glands, and again, to distended sebaceous glands. So-called strophulus, characterized by bright-red points, seated on the face and arms of children, is, in fact, a hyperæmia of the papillæ or sweat glands, mostly induced by the child being kept very much wrapped up, and so overheated. *S. albidus* is the term given to the small pearly-white specks seen about the face of children, and due to distended sebaceous glands. The hyperæmic states alluded to above are exaggerated by any stomach disturbance.

Strophulus pruriginous is a modification of *Lichen urticatus*. When, in ill-nourished children, that disease be-

comes very chronic, the "wheal" or "urticarial" aspect may give place to the "pruriginous" almost, if not entirely, and when the skin is covered pretty uniformly with the pruriginous papules only, then the condition known as *Strophulus pruriginosus* is present. At least this is the history of cases I have seen, though I notice Duhring states that Hardy recognized a case of true prurigo as one of *S. pruriginosus*.

Treatment.—Some mild aperient and antacid should be given, with the adoption of a cool regimen, and the local use of some simple soothing lotion, as (74). *S. pruriginosus* needs locally simple baths, followed by inunction of oil, generous diet, and cod-liver oil and iron internally.

Sudamina are the tiny, rounded, non-inflammatory vesicles formed by the collection of *sweat* between the layers of the cuticle, and due to the excessive or suddenly augmented secretion of sweat. They are especially met with in the summer months, when the sweat glands are very active, and more particularly in the course of a febrile disease, such as phthisis or acute rheumatism, and during the critical sweats. The causes that lead to the formation of Sudamina may also excite some inflammation, and then the usually transparent contents of the sudamina may become opaque and puriform, and the vesicles may be complicated by miliaria. Sudamina seldom exceed a pin's head or millet seed in size, though, very rarely, they become confluent into bullæ. The vesicles may crowd the surface or be sparsely distributed, and they are most often seen about the neck and trunk.

Treatment.—As with miliaria, when met with as an accidental occurrence in the pyrexial state, the presence of sudamina is of little importance, but otherwise it should be borne in mind that they may be evidence of debilitated health which requires tonics.

Sycosis is the name given to inflammation of the hair follicles of the beard and whiskers. There are two forms.

In the one the disease is caused by a vegetable parasite, and is designated *Tinea sycosis*. (See that disease under the head of *Tinea*.) The other arises as an idiopathic inflammation of the follicles, and then is called simply *sycosis*. In this latter simple or non-parasitic form the disease consists in simple catarrhal inflammation of the follicles, characterized by pain, heat, redness, and the speedy development of pustules, at first small, then larger, which have this peculiarity, that they are pierced by a hair and are scattered, here and there, about the hairy parts of the face. The pustules, which indicate that the whole hair sacs and their walls are inflamed, may become more or less indurated at their bases, forming quasi-tubercles. If the inflammation is severe, and the pustules are crowded together, there may be considerable discharge and crusting. The derma and connective tissue textures of the affected part may be involved, so that the parts are reddened, hot, swollen, and infiltrated, and the patient may suffer great pain. The disease, however, differs very much in severity. It often occurs in the debilitated, the intemperate, the dyspeptic, and eczematous. It often, too, runs a very chronic course, especially in strumous subjects, and in such cases more or less atrophy and loss of hair may result; in fact, as a consequence of the depth and severity of the inflammation, a condition simulating lupus may result.

In some cases the upper hairy lip is the seat of the *sycosis*, and the disease begins as a catarrh of the mucous membrane of the nose, the inflammation spreading down and involving the follicles of the lip. The characters in the main are those of *sycosis*, but there may be great swelling and infiltration, so that the disease looks like a mass of fleshy outgrowth, with considerable elevation. There are, however, usually, characteristic pustules. We presume this is the *Impetigo sycosiformis* of authors. The main thing to

recollect about the disease is the necessity for soothing treatment.

Treatment.—It is generally considered that *epilation* rapidly cures the disease, but this is a mistake, and, indeed, the procedure often does harm. Some say that sycosis is caused by the premature development of a new hair in the follicle, and so epilation does good. This is not true. Others think that epilation relieves the tension. In some cases the inflammation does not extend to the deeper part of the follicle, and so the procedure can scarcely be of service; but it no doubt is of use if there be much chronic inflammatory thickening involving the deep parts of the follicle with free suppuration, especially if there be much tension, and the pus has a difficulty in escaping. Sycosis should really be treated as a simple inflammation, locally by hot fomentations and soothing remedies in the early and acute stages, and subsequently by the use of astringents, as (75), followed by weak mercurial ointments, and, lastly, tar or sulphur applications. Internal treatment consists in the use of aperient tonics, as (95), or saline aperients at the outset, in cases where there is much hyperæmia and patients are gouty; later on cod-liver oil and iron are needed, and lastly, a course of Donovan's solution where there is much indolent thickening. Where there is much thickening, painting with liquor potassæ, followed up with the use of mercurial plaster, is often of service, but the disease must be in an indolent state for this treatment. We always find, where there is much infiltration about the follicles and any tendency to atrophy of the textures, that antistrumous remedies internally and mild astringents externally do most good.

Syphilis of the Skin is met with in connection with hereditary and acquired syphilis.

Hereditary syphilis is practically nearly synonymous with congenital or infantile syphilis. This form is uncommon

before the end of the second or beginning of the third week, and it is rare after the sixth month; the usual period of its occurrence is when the child is about three weeks or a month old. No one can mistake the tainted infant: the general aspect is more or less marasmic; the child presents a shrivelled, "old man"-like aspect; the skin is dirty and muddy, it has lost its elasticity, and hangs in loose folds; it is dry, often exfoliating, and more or less erythematous about the buttocks. The cry of the child is harsh and cracked (characteristic), and "the snuffles, produced by inflammation and ulceration of the nasal mucous membrane, are present." The disease is further characterized by the presence of mucous tubercles about the anus or mouth; fissures at the angles of the mouth; ulceration of mucous surfaces; a high arched palate; inflammation of the thymus gland; various eruptions over the body, especially about the feet and hands, in the form of erythemata or bullæ; a subacute onychia is possibly present; and these, together with a family history of syphilis, are diagnostic.

With regard, however, to the eruption, it is generally in the form of a dull-red erythema of the hands, feet, and perianal region, with or without tubercular formations; but it may in cachectic subjects consist in ugly ulcerations arising out of tubercles, bullæ, or pustules.

The *treatment* consists in gently mercurializing the child by the use of gray powder or mercurial inunction (a small portion of blue ointment being rubbed into the soles of the feet each night), in keeping up the nutrition of the body by good food, by giving cod-liver oil and chlorate of potash, and, if the child is nursed, in giving the nurse a course of iodide of potassium [which the infant imbibes with the milk].

Acquired Syphilis.—When in the adult an eruption is due to this cause, there is usually imparted to it a coppery tint, and a more or less circular form; the distribution of the eruption is general over the body and usually there is ab-

sence of pain and itching; there is also a polymorphism about the eruption, that is, it is made up of a variety of forms such as papules, tubercles, and ulcers (occasioning loss of substance), etc. In addition, cachexia, ulcerated throat or tongue, alopecia, nocturnal pains in different parts are the usual concomitants; and a history of the primary disease may be connected by different links with the existing condition by a series of syphilitic occurrences.

Syphilodermata may be divided for all practical purposes into three groups: (a) those that are simply hyperæmic; (b) those that have deposit (or new tissue formation) as the main feature; and (c) degenerative lesions, the result of suppuration and ulceration of the syphilitic new tissue formed in the skin.

The following sketch may throw light on this subject. The first effect of the syphilitic poison upon the general system is to give rise to syphilitic fever and transitory hyperæmic lesions, as *roseola* and *erythema*, which are phenomena belonging to the early stage of syphilis. These occur with the syphilitic fever, in patches over different parts of the body, and in connection with many other evidences of the action of the syphilitic poison—i. e., specific sore throat, neuralgia, alopecia, etc., and this rash is not pruritic. Sufficient time having elapsed for the action of the poison upon the nutrition of the textures, a second period ensues, in which modifications of their normal growth take place—that is, new tissue is formed (granulation or syphilitic tissue), and the results appear in the form of erythematous, papular, tubercular, squamous, and pustular eruptions, mucous tubercles, gummata, etc. The first five of these occur in the early stage of disease. They occur, of course, in connection with the general symptoms of the disease, including sore throat, falling off of the hair, neuralgic pains, etc. They affect the body generally, and are not irritable.

The *erythematous* form is the earliest cutaneous manifes-

tation. It may occur at the onset as a subcutaneous mottling or maculation, simulating measles or even a typhus rash, only the general symptoms of these diseases are quite wanting, but usually it appears as more or less circular spots the size of from split peas to shillings, of at first a rosy hue, and later on acquire a reddish or purplish tint. They are best seen about the trunk, but also on the limbs, and come out most distinctly after exposure of the skin to the cold air or after a cold bath. The rash does not itch, and the medical man often discovers it for the patient in its early stage. It runs a very indolent course, but is attended by significant general symptoms, enlargement of the glands in neck, faucial redness, and the like. In the case of the *papular* form, little dull red or brownish papules are scattered more or less over the body, perhaps grouped together. These enlarge into the *tubercular* form, and either of the two may suppurate and produce *pustular* syphilis; and so it is usual for these changes or different forms to be found together in the same subject, in fact multiformity of eruption is one of the chief characteristics of syphilodermata. The *squamous* form is made up of a multitude of small, round, dull red spots, covered over by a few fine, thin, and adherent scales. Large patches are subsequently formed by the coalescence of smaller ones, or the crowding together of tubercles, and the disease often creeps along the surface in a serpiginous manner, and ulceration is then common. But the circulating poison also causes the skin glands to inflame and so produces *syphilitic acne*, or in the case of the follicles so called *syphilitic lichen*. These commence also in hyperæmia of the sebaceous glands and follicles, but the hyperæmia is not now of a transient character, but is followed by the formation of syphilitic tissue in and about these parts. The affection of the follicles and glands is not limited, but the whole body is affected. If the rash be lichenous it will be noticed that the papules are collected together over the body and limbs in groups or

clusters, and they leave on their disappearance little pits: and *they are not itchy*. In acne the spots are generally not irritable, and tend to ulcerate and to be mixed up with other forms of eruption. In both cases concomitant evidences of syphilis are present. Any of the earlier papular or tubercular eruptions may take on the pustular form. The nerve-trunks also may become irritated by the poisoned blood, or the deposit about them, and *herpes* and *pemphigus* occur as a consequence. A common occurrence is so-called syphilitic palmar *psoriasis*, which consists in a hard, indurated, cracked, scaly surface, or hard tubercles about the palm of the hand, and in connection with other signs of syphilis. Syphilitic psoriasis begins in the palm of the hand as the rule, and occurs in connection in a large number of cases with specific ulceration about the tongue and other evidences of syphilis, by which the diagnosis is at once made certain. Syphilitic *ecthyma* is known by the indolent character of the pustules, their free crusting, and their tendency to ulcerate, and their admixture, with many other evidences of the specific disease. The further stage of syphilis of the skin consists in the infiltration by the syphilitic granulation tissue of the deeper parts, and more extensively than before of the superficial ones, whilst the patient's general health becomes cachectic. Then, in this third stage, the syphilitic tissue softens up, suppurates, or ulcerates; and this latter phase is characterized by degenerative changes in the syphilitic deposit in different parts, as is seen in ulcers, onychia, etc.

Treatment.—Internally in the papular, tubercular, squamous, and pustular syphilides, mercurial treatment is called for, and the bichloride pill (105) is the best form. This pill may be given for three or four weeks, or omitted before the gums begin to be affected. See also (84 *et seq.*) and (104). Iodide of potassium may be given at the same time in increasing doses. In the ulcerating forms, if the patient be well nourished and strong, there is no objection to a mercur-

rial course ; but where cachexia is marked, and the patient's condition is one of evident debility, iodide of potassium, with cod-liver oil, or iodide of iron and good food, constitute the best treatment. In cachectic subjects, who are debilitated, restless, and irritable, opium given internally is of much service. In reference to iodide of potassium, it must be borne in mind that its use is beneficial in direct proportion to the duration of the disease ; hence when nodes, tubercles, caries, and secondary ulcers are present, or when mercury has been fully used or apparently failed, the dose should be gradually increased by three or four grains every few days, until in the case of old-standing and ulcerating syphilis it reaches thirty or forty grains. In most cases the exhibition of the decoction of various woods is advisable ; the compound decoctions of sarza and guaiacum are the best ; they keep the skin and bowels acting freely, and thus very materially help the elimination of the poison.

When a patient is under the influence of mercury he should avoid stimulants, cold, and other sources of irritation and catarrh ; the indulgence in stimulants, indeed, is a source of infinite harm, and a common cause of aggravation of syphilis of the skin. The diet should be good and nutritious, and the administration of mercury should always be followed up by a course of mineral acids and bitters, or iron and quinine, etc. ; or tonics may be given simultaneously with the specific remedy, and with a liberal hand if the general health is bad.

Mercurial fumigation, which acts both locally and generally, is in great favor with some practitioners. If the skin eruption is extensive it may be employed twice or more a week.

Locally, the erythematous forms require no special application, but a lotion of oxide of zinc and calamine may be used. Should they be obstinate and leave behind any papules, a white precipitate ointment is preferred. The squamous and papular eruptions are relieved by calomel ointment,

bichloride lotion, and nitric oxide of mercury ointments. The tubercular and ulcerating forms are those which require special local medication: in the former, the weak nitrate, or nitric oxide of mercury ointments, are those more especially useful, and nitrate of mercury may be cautiously used to destroy obstinate indurations; ulcers may be dressed, if painful, with a solution of watery extract of opium, or be dusted over with calomel, or be stimulated with the nitric oxide of mercury ointment, dilute nitric acid, and borax lotions (45), (62), (63), or treated by the local application of mercurial vapor. Should ulcers be very foul and dirty-looking, iodide of starch (52) is a good remedy, and when cleansed the sore may be dressed by a weak mercurial application or astringent wash. Formulæ (3), (7), (23), (58), (59), (60), (61), (80), (81), (82), (83), will also be found useful.

Tinea is the generic term given to the vegetable parasitic diseases. They are:—

1. *Tinea favosa* or favus, caused by a fungus called *achorion Schönleini*.
2. *Tinea tonsurans*, or ordinary "ringworm" of the scalp, caused by the *trichophyton tonsurans*.
3. *Tinea kerion*, which is a modification of the last, and is caused by the same parasite.
4. *Tinea circinata*, or ordinary ringworm of the body, which includes Burmese ringworm, Malabar itch, Chinese and Tokelan ringworm, etc., and is caused by the *trichophyton tonsurans* also.
5. *Tinea sycosis* or mentagra, or sycosis parasitica, caused by the *microsporon mentagrophytes*.
6. *Tinea versicolor*, or Chloasma, or Pityriasis versicolor, caused by the *microsporon furfur*.
7. *Tinea decalvans*, or area, or alopecia (one form), caused, it is held by some, by the *microsporon Audouini*, but its existence is doubtful.

There are two other parasitic diseases which may be mentioned here—viz., *Mycetoma*, or the madura foot or fungus foot of India, caused by the *chionyphe Carteri*; and *Onychomycosis*, or onychia parasitica, alluded to elsewhere.

Tinea favosa is rare in England. It attacks the young, and is known by the presence of dry, light, sulphur-colored, cup-shaped, umbilicated crusts, made up of fungus elements, and pierced in the centre by a hair from the underlying follicle. These crusts may run together into a confused mass in some cases.

Treatment.—The point is, after getting off all the crusts by oil soakage, to destroy the parasite by sulphurous acid lotion, and then epilate bit by bit of the surface, and apply such parasiticides as 121, 122, 134, 136, until the microscope shows that the hair is free from fungus.

Tinea tonsurans is very common in the young, but is very rare in the adult, and when it does occur in the adult it is not severe. It is sometimes epidemic in schools, spreading from child to child by contagion. The typical disease consists of circular patches, varying from a sixpence to a five-shilling piece in size or larger, having a slightly raised and scurfy surface, *the hairs on which are dry, brittle, lustreless, and broken off close to the scalp*. These diseased hairs are always present, however the configurative size or scaliness of any given patches or areas of disease may vary. This condition is caused by the fungus attacking the hairs—a fact easily shown by soaking a diseased hair in weak potash solution and then examining it under the microscope, when it will be seen that the hair is invaded to a greater or less degree by the *conidia* of the trichophyton tonsurans. These conidia, when very numerous, besides crowding around the hair shaft, collect into parcels within, and separate the fibres of the shaft one from another, so that the hair is split up. These short, broken-off, opaque, dull hairs are, as just stated, diagnostic. But there are many deviations from the typical aspect of

ringworm. It may consist of a few broken-off hairs in groups, or of isolated diseased hairs scattered here and there, or little patches like pityriasis, the scales concealing a few diseased hairs, or of diseased hairs seated in little suppurating points—*i. e.*, hair follicles, or in typical reddish, scaly patches, with diseased hairs. But in all cases, typical and unusual, the presence of short, broken-off, brittle, diseased hairs suffices for the diagnosis. In no other disease do these occur. *Tinea tonsurans* and *tinea circinata* are often observed in the same subject, and, in fact, they are essentially the same, only that one occurs on hairy, the other on non-hairy parts.

Treatment.—If the fungus has not got deeply into the follicle, it can readily be destroyed: therefore the more recent the disease the more easily can it be cured. In very *recent* cases, two or three applications of the tincture of iodine of double strength, or a blistering, may almost if not quite cure: this should be followed by the use for awhile of some mild parasiticide, as (121) or (122). The hair should be cut off the scalp for an inch or so around and about the diseased patches.

In *chronic* cases, if there are many patches scattered over the head, the whole hair should be shaved or cut off close to the scalp; and, if much diseased, the whole head may be soaked in sulphurous acid lotion (125, one part to three or four of water) for a week, to get rid of the disease on the mere surface. Then it is well to epilate over a certain area day by day, subsequently applying (136) cautiously for seven or eight or more applications at intervals of three or four days. The application will form a cake, and this should be removed by grease or soap in a day or two, or when it begins to “flake off,” and before a fresh application is made. Blistering may be used instead. In getting off the caking, a number of diseased hairs come away entangled in the flakes, and this may serve in place of a repetition of epilation.

It is no use applying (136) to the surface whilst the cake is on it, but a clean surface must be obtained about three days or so after an application. It is advisable to continue the applications until the hair begins to grow out in a natural direction and manner, and then to apply some mild parasiticide, as (128) or (134). In severe cases, epilation must be carried out again and again over the patches, and parasiticides must not be discontinued as long as a single broken-off hair can be detected, or any little dark stubs are visible, or until the hair grows evenly and well over the surface. The parasiticides that are used are very multitudinous; a few suggestions will be found in the Cutaneous Pharmacopœia. I have lately used an ointment made of white precipitate ointment half an ounce, a like amount of lard, and from three to six grains of the crystals of terchloride of antimony, and to small obstinate patches I have smeared lightly on a little of the terchloride of antimony, pure. It gives pain, but it suppurates the hairs out. It should be used with great caution, and to a very small spot at a time, and only by the medical man himself, for Goa powder is too inconvenient to use to private patients.

Tinea circinata, or ringworm of the body, is characterized by the occurrence of patches which are red, scaly, and itchy, circular in form, and with a well-defined edge. It begins as a little red scurfy spot, which gradually enlarges, and when it has reached a fair size the skin in the central part *may* be apparently healthy: usually the edge looks red and scaly, the centre generally somewhat paler and less scaly, though covered with a branny desquamation. The edge of the patch may be vesicular, and the disease is evidently inflammatory. It is excited by a fungus that spreads equally in all directions, and so produces the circular form. The inflammation falls short of that which occurs in eczema. Any scurfy, red, itchy patch then on the surface of the body should always be examined for fungus elements. The fungus

is the same that occasions *tinea tonsurans*, and the two diseases often occur together.

In hot climates especially, the fungus sometimes luxuriates upon the skin, particularly in the mycelial form, and hence *tinea circinata* occurs in very large patches. These are very hyperæmic or papular at their edges, which are well defined, their centres desquamating and being slightly scaly. In the fork of the thigh and contiguous parts, patches that have the characters of *tinea circinata* in this exaggerated form mostly occur, and are characterized particularly by the festooning downwards over the thigh of a red scaly, itchy patch, that has a *well-defined circular and papular edge*. This is the Burmese or Chinese ringworm.

Treatment.—This is always successful. The constant use of some such parasiticide as (122), (128), or simple tincture of iodine, or an ointment made of five grains of white precipitate and ten to twenty of carbolic acid, or an application or two of Goa powder in severe cases, will always cure the disease.

Tinea sycosis.—This disease, which is very rare in England, unlike non-parasitic sycosis (*see Sycosis*), consists of little raised, bumpy, scurfy patches, often unsymmetrical, but the hairs of which are loosened, rendered brittle, and, in fact, changed as in *tinea tonsurans*. The disease is to be treated in a similar manner. Happily the hairs can be readily extracted, so that the cure is rapid.

Tinea versicolor (*Pityriasis versicolor* or *Chloasma*).—This disease consists of fawn-colored patches occurring in the parts covered by flannel, especially the front of the chest and the root of the neck. The patches vary in size, and may dot over the surface or run together so as to cover uniformly a large area. They are raised and itchy, and scales can be scraped from them, which under the microscope are seen to be invaded by conidia (in heaps) and the mycelial threads (very wavy) of the fungus—the *microsporon furfur*.

The disease is sometimes mistaken for syphilitic maculæ, but the latter are not raised, not itchy, and not scurfy.

Treatment.—Apply (127) regularly and for about ten days or so after all appearance of the disease has vanished.

Tinea kerion is simply *tinea tonsurans* in which the hair follicles are a good deal inflamed and pour out an albuminous fluid. The special features of the disease are—the general prominence of the patch; its perforation with foramina—*i. e.*, the swollen mouths of the hair follicles; the outpouring of a mucous fluid; the non-suppurating of the swelling, which, although feeling boggy and as about to suppurate, should never be opened; and the looseness of the hairs. The disease leaves temporary bald patches behind, and the fungus is observed to have invaded the hairs, as in *tinea tonsurans*.

Treatment.—Allay the inflammation by the use of an ointment containing a drachm of liquor plumbi in an ounce of lard, night and morning; epilate; and then use some very mild parasiticide, if need be, as in ordinary ringworm, but usually the hairs are loosened by the suppurating, and readily come away, whereupon the fungus dies and there is no need for any parasiticide, and especially as the parts being so tender require some simple soothing unguent, and the inflamed parts heal rapidly under such a remedy.

Tinea decalvans, see Alopecia.

Trichorexia Nodosum or Trichoclasis.—In certain states of ill health, though the patient may appear vigorous, the hairs become imperfectly nourished, their component cells are dry and not completely organized into fibres, and the hair consequently becomes brittle, and its structure disorganized. The result is the production of little knots here and there along the shaft, which look like nits, and feel hard in some cases, the hair nearly breaking at these spots. The hairs of the beard are usually affected, but those of the axilla and even head may be attacked. Under the micro-

scope the appearances presented are those of slight swelling of the pith, with deficiency of pigment in the central parts, and slight increase of the cellular elements of the shaft in an early stage, but generally those occasioned by the splitting of and fracture of the fibres of the shaft, so that the aspect is similar to that produced by thrusting one besom or brush into another, so that the bristles or hairs interlock. At other times the free end of the hair is like a brush, from the fact of the shaft having been broken away at one of the nodules. The disease is not parasitic. The treatment consists in restoring the tone of the system, in anointing the hairs with grease, or if that fail in shaving off the hairs of the affected part several times.

Urticaria, or Nettlerash.—The features that attract attention, and which are quite diagnostic of this affection are—*first*, the sudden way in which the erythematous rash appears and disappears, or, in other words, the capriciousness of the eruption; *secondly*, the development of “wheals,” like those caused by the stings of nettles, in the centre of the red hyperæmic patches, attended by tingling and stinging. These “wheals” have been fully described in speaking of “elementary lesions.” Urticaria presents differences in the adult and child.

In the *adult* the wheals are always well marked, and leave no trace of their presence behind when they disappear. The urticaria may be acute, and is then generally the result of some dietetic error—*e. g.*, the eating of shell-fish or some unwholesome irritating food, as potted meats, and it is attended by pyrexia often severe, with even vomiting and prostration; the skin itches severely, and then out comes the wheal eruption. Sometimes the face is attacked and swells enormously, but the eruption at once discloses the nature of the case. Usually in the adult, however, the urticaria is chronic, and it is made up of recurrent crops of wheals which

occur at uncertain times and intervals, and localities, lasting sometimes for months and years, and under a variety of different influences, such as mental worry, exposure to cold, stomach derangement, physical fatigue, excesses in diet of various kinds, rheumatic attacks, and menstrual disorders. The wheal may be the seat of hæmorrhagic effusion, hence the term *purpura urticans*.

In the *child* the wheals may be like those seen in the adult in exceptional cases, and the disease is generally then of the acute form, but as the rule the wheals are very small and not so distinct, and are followed by the development of little fleshy papules—hence the term *lichen urticatus* or *urticaria papulosa*. In this malady the trunk, arms, and limbs become the seat of nascent wheals, like “bug bites,” so the nurses say, and the lichenous condition is left behind. In some cases the papules may vesicate, and even tend to suppurate. This lichen urticatus causes great irritation, is very common in the young, and simulates scabies, but it lacks the characteristic localization and cuniculi of the latter. The papules become “pruriginous” in proportion as the disease is chronic.

In both children and adults the disease may be *primary* and idiopathic, or *secondary* to some other disease, as scabies and phthiriasis. In the latter, too, there will be a history of antecedent disease of the kind mentioned, and the actual concomitants of the symptoms of these diseases. In the idiopathic form the hyperæmia and wheals exist as the sole disease present.

Urticaria pigmentosa is a designation recently applied to the eruption we have termed *Xanthelasmoides* (which see), because of the tendency to the formation of wheals, but the presence of these wheals is not the important consideration in regard to the disease, and to speak of it as an urticaria is a clinical error of some moment.

Treatment.—In the *adult* in the acute form an emetic may

be given if need be, with alkalies and a slight aperient. Chronic urticaria in the adult is much more troublesome. There is no pyrexia, but constant recurrence of redness and wheals with heat and itching. Assuming the existence of an irritable state of skin, the eruption appears frequently to be kept up by nervous debility, by dyspepsia, and by uterine or liver disorder. These are the common excitants of the disease. In loaded states of the system, large doses of alkalies internally, followed by (95), and, if desirable, arsenic, with bran and alkaline baths (1a and 1b), or vapor baths if the skin does not act properly, are beneficial. Such lotions as (18), (23), (26), (27), (30), (31), (33), and many like ones, may be used. But the best of all, we think, is one made of 2 scruples of benzoic acid, to 6 ounces of water, and a drachm of eau de Cologne. It can be applied whenever the wheals trouble. A similar line of treatment must be adopted for the *child* in the early stages, though care should be taken to keep the kidneys acting well to see that there is no dyspepsia, intestinal derangement, and no improper feeding, and to give cod-liver oil if the health is poor. Locally, soothing remedies are needed (74); but sulphuret of potassium baths in chronic cases are very efficacious. Ointments of storax or calomel and belladonna will be found successful in allaying accompanying pruritis, especially if excited by animal parasites, such as bugs, fleas, lice, etc. There are a number of cases of urticaria in the adult, and lichen urticatus in the child, which get well with simple baths, and cod-liver oil and bitter tonics. These are such cases as are apparently unconnected with any gastric, intestinal or similar disorder, but seem to be associated purely with an excitable nervous system.

Vitiligo is a term used by many at the present day as synonymous with Leucoderma, but Dr. Tilbury Fox has seen such a disease as Bateman describes under this term, and

believes it to be an atrophous condition in scattered spots, of very rare occurrence, and differing from what Willan intended by, and figured in, his plate 60 under that name. Willan's plate probably represents the disease named *Xanthelasma* by Dr. Tilbury Fox (see *Clin. Soc. Trans.*), and subsequently *urticaria pigmentosa* by others. (See *Xanthelasma*.)

Vitiligoidea.—This is a term applied to *Xanthelasma*, which *see*.

Xanthelasma.¹—*Xanthelasma* has received many different names. For instance, *Plaques jaunâtres des paupières* (figured by Rayer, 1835); *Vitiligoidea* (Addison and Gull, 1851); *Xanthelasma* (Erasmus Wilson); *Xanthoma* (Frank Smith); *Molluscum lipomatodes* (Virchow, 1871); *Molluscum cholestérique* (Bazin). This disease occurs in two forms. The simple form, known as *Xanthelasma palpebrarum*, was first figured by Rayer in 1835. It is a fairly frequent affection which occurs in people generally past middle life, and has not been met with under puberty. The appearances presented by the yellow, slightly raised, firm, chamois-leather looking patches are very characteristic and striking, and the localization on the eyelids not less so. The patches begin almost invariably in the inner canthus of the upper eyelid, and usually the left first, thence spread to the corresponding part on the other side, and subsequently may gradually affect the lower lids and so encircle the eye. It is noticeable, in contradistinction to the other form, that those affected with this simple kind have rarely suffered from jaundice previously or at the time of the appearance

¹ The reader is referred for fuller information, and the literature of the subject, to an elaborate monograph by Dr. Pye Smith, in the *Guy's Hospital Reports*, vol. xxii., for 1877.

of the patches; indeed, their development is unattended by any general or local symptoms, and no treatment is required. Mr. Hutchinson called attention to its frequent association with a predisposition to sick headaches, but Dr. Pye Smith has shown that the connection is probably only accidental. Dr. Church recorded a remarkable instance of heredity of the affection, and this observation has been confirmed by Dr. Wilks and others.

The multiple form, of which only about 18¹ undoubted cases have been recorded, was first described by Addison and Gull, in 1851. Of the cases collected by Pye Smith the ages varied from 28 to 58, a younger average than in the other variety; and Bazin has recorded a very marked case in a boy at the age of 16. This general form has invariably been preceded by long-continued, often recurrent, jaundice, arising from an organic cause—the shortest duration of the jaundice being six months (death from cancer), and the longest about six years. “The eight cases which proved fatal have been ascertained to be, two of cirrhosis with hypertrophy, one of simple, and one of cancerous, stricture of the common duct, one of obstruction from hydatids, two of occlusion by gall-stones, and one of ‘chronic atrophy of the liver.’ In two other cases gall-stones were passed during life, and in three others the symptoms were pretty certainly referable to ordinary cirrhosis.”

The characteristic maculæ appear first around the eyelids precisely as in the simple form, and next usually affects the natural creases and folds of the skin of the palms, and then those of the face, neck, ears, scrotum, the soles of the feet,

¹ Pye Smith has collected 18, but he has omitted Bazin's case. The authors have seen another well-marked case in a London hospital, in a woman the subject of long-continued jaundice, and they have known of another case. Hebra and Kaposi have also recorded one or two cases, but of so exceptional a nature that we have excluded them.

the flexures of the joints, the abdomen, and the back. If the cause be longer continued, in addition to lines and patches, papules, which become confluent in nodules, have appeared in a few cases, beginning on the extensor aspect of the elbows and knuckles, but these nodules never exist without the maculæ. The latter have also been found in the mucous membrane of mouth, lips, tongue, palate, trachea, bile-ducts, etc. The progress of the affection is very slow, and in very long standing cases some of the maculæ and nodules may grow less and even disappear.

It is unsafe as yet to pronounce with certainty as to the cause, but the changes in the skin are probably due to the irritation produced by the circulation of bile pigment, or, at any rate, some improper liver product. But the reader must weigh such facts as that multitudes of jaundiced cases occur without a sign of this affection, and that simple xanthelasma palpebrarum is rarely associated with jaundice.

The minute anatomy of the two forms may be considered together, and has been elaborately worked out by Pavy and Moxon, Frank Smith, Waldeyer, Hawse, Legg, Kaposi, Fogge, and Pye Smith. Hebra, at first, affirmed the sebaceous nature of the disease, but this has been thoroughly disproved by succeeding observers. Dr. Pye Smith sums up the results arrived at thus: "Xanthelasma consists anatomically in a chronic hyperplasia of the deeper layer of the cutis, in which the papillæ and epidermis, on the one hand, and the subcutaneous connective tissue, on the other, are only secondarily involved. The process may run in two directions. When it follows what may be called the inflammatory type, the minute, round, inflammation-cells or young leucocytes never form true tissue elements; molecular fatty degeneration rapidly overtakes them, and leads to their ultimate disappearance in a detritus of oil-drops, calcareous masses, and cholesterine crystals. . . . The other course, the disease may take, approaches the process of formation of a true tumor

or new growth. Here also we must recognize some local 'irritation' as the immediate cause of cell-proliferation, but the new cells produced are in these cases more robust and long-lived. Instead of quickly dying by fatty degeneration, they grow to a considerable size and develop processes, so as to form the fusiform and stellate corpuscles of connective tissue. The intercellular matrix also develops into well-formed fibres. These cells are also liable to fatty degeneration, but the process is much more slow, less destructive, and more akin to the normal transformation of ordinary connective into adipose tissue. . . . That the two directions the morbid change may take are far from mutually exclusive is shown by the histological characters as well as by the clinical features of the disease. For the internal organs the condition is all but simple fatty degeneration; in the maculae of the skin there is more persistent cell-proliferation, and in nodules of *X. tuberosum* the formative process greatly outstrips the degenerative."

The macular form on the eyelids and generative parts has to be distinguished from patches of aggregated milium and also tiny sebaceous cysts.

Treatment must be directed to removal of the cause of the jaundice, and perhaps, when the patches get painful, as is often the case, some local soothing applications may be comforting. Or should the presence of the patches in *X. palpebrarum* be strongly objected to, Mr. George Lawson's operation for their removal may be performed. He pinches the diseased portion of skin up, cuts it off with scissors, and brings the edges of the wound together with a suture or two. The result is eminently satisfactory.

Xanthelasma is a term which we give to a rare form of eruption characterized by the presence of certain buff-colored patches that appear in a scattered form in young children, and at first sight look like xanthelasma, in small

patches, so far as external features are concerned. Cases of the kind have been reported by us in our Atlas of Skin Diseases, and a plate representing the disease as it attacked the leg of a little boy is there given. The disease may be in part congenital, or it may appear soon after birth, usually when the babe is about two months old. Parents say that itchy bumps or places like flea-bites, or even vesicles, first appear, and these turn into red, bumpy places, which speedily assume a buff color. The spots may be scattered sparsely or thickly, over parts or the whole body. They are distinct the one from the other, and vary in size from a pea to a shilling or so. The disease has been generally mistaken for syphilis. The spots are readily irritated, and "wheal-like" appearances are presented by the patches when freely rubbed; wheals also are produced by scratching in the healthy islets of skin, and this fact, coupled with the presence of the pigmentation, has led to the suggestion of the term *urticaria pigmentosa* for the disease; but the wheal-like aspect is only accidental and temporary; a superaddition, in fact, to the real morbid condition, which is clearly an increase of substance in the skin, that undergoes no change through a long series of years. Nothing is known of the nature of the disease histologically, but we hope ere long to publish the results of our researches on this point. The disease seems to be unaffected by remedies, to produce no disturbance of the general health, to undergo little change except that the spots become less elevated and paler by age. The chief thing to recollect about it is its liability to be mistaken for congenital syphilis, an error that may entail considerable risk to the child from the adoption of an anti-syphilitic treatment for the disease.

Xeroderma, *see* Ichthyosis, and Atrophy of the Skin.

Zoster, *see* Herpes.

PART III.

CUTANEOUS PHARMACOPŒIA.

BATHS.

1. THE quantity of water in a bath is estimated at *thirty gallons*, and the temperature of the water should be from 90° to 95° F.

(a.) *Bran and gelatine bath*.—The quantities to be used are—of *bran*, 2 to 6 lb.; of *gelatine*, 1 to 3 lb.; or of *size*, 2 to 4 lb. Used in all *erythematous* and *itchy* and *scaly* diseases.

(b.) An *alkaline bath* is made with from ℥ij to ℥x of *bicarbonate of soda*, or ℥iij of *borax*. It is sometimes useful to add to the bicarbonate of soda some *bran liquor*, made by infusing bran, put into a flannel bag, in a gallon or so of hot water. Used in *eczema*, *psoriasis*, *urticaria*, *lichen*, and *prurigo*, where there is much local irritation.

(c.) An *acid bath* is made with ℥j of nitric or muriatic acid or a mixture of the two (℥j of each). Used in *chronic lichen* and *prurigo*.

(d.) A *sulphurated potash bath* is made by adding ℥ij to ℥iv of the drug to each bath. The compound sulphur bath of Startin has ℥ij of sulphur (præcip.), ℥j of hyposulphite of soda, and ℥ss of dilute sulphuric acid with a pint of water. Used in *itch*, *chronic eczema*, *lichen*, and *psoriasis*.

FUMIGATION.

2. To administer a medicinal vapor bath, heat is to be applied simultaneously to the drug and a small tray of water,

so that steam and vapor of the drug may arise and surround the patient's body together. The necessary apparatus may be obtained at any instrument makers, or easily be improvised. A quarter of an hour, and if possible less, should usually suffice for the proper action of the bath. The object is not to sweat the patient, but to get the skin *slightly relaxed* at the moment the vaporized metal rises from the heated tray below, the object being to secure its deposition upon the surface at once.

For a *mercurial* bath fifteen to thirty grains of calomel, and for a *sulphur* bath from one to two ounces of sulphur should be used.

CAUSTICS.

3. Calomel, \mathfrak{Z} ijss; bisulphide of mercury, \mathfrak{D} ij; arsenious acid, \mathfrak{Z} j. Used in *lupus*, *scrofulous ulcers*, and *syphilis*.—(Dupuytren.)

4. Caustic potash and water in equal parts. Useful in *lupus*.

5. Acid nitrate of mercury, made by dissolving \mathfrak{Z} j of mercury in \mathfrak{Z} j of nitric acid (sp. gr. 1.40). Used in *neoplas-mata*, *acne indurata*, and *rosacea*, etc.

6. Chromic acid, \mathfrak{Z} j; water, \mathfrak{Z} iv. Used for *warts*, *lupus*, etc.

7. Powdered savin, perchloride of mercury, red oxide mercury, āā \mathfrak{Z} j. Used for *condylomata* and *warts*.—(Langston Parker.)

8. Carbolic acid, 1 part; alcohol, 1–4 parts. Used in *lupus*, *syphilitic ulcers*.

9. Nitrate of zinc, 1 part; bread mass, 2 or 3 parts. Used in *lupus*, spread thinly on the part.

9a. White arsenic, 10 grains; cinnabar, \mathfrak{Z} ss; lard, \mathfrak{Z} ss. To be used to small portions at a time of *lupus erythematodes*, and to be re-applied if necessary.

ASTRINGENTS.

Alum and Zinc.

10. Alum, gr. xx; sulphate of zinc, gr. x; glycerine, ℥j; rose-water, ℥iv. Used in *erythema, intertrigo, eczema*.

Tannic Acid.

11. Tannic acid, gr. xl; French vinegar, ℥ss; distilled water, ℥viiss. Used in *seborrhæa*.—(Neligan.)

Myrrh and Zinc.

12. Tincture of myrrh, gtt. xxx; zinc oxide, gr. xx; cold cream, ℥j. Used in *prurigo, erythema, lichen*.—(Neligan.)

Bismuth and Vaseline.

13. Trisnitrate of bismuth, ℥ij; solution of subacetate of lead, 30 drops; vaseline, ℥j. For *intertrigo, eczema*, etc.

Zinc and Glycerine.

14. Zinc oxide, ℥ij; glycerine, ℥ij; solution of subacetate of lead, ℥iss; lime-water, ℥vj to ℥viiij. Used in the secretory stage of *eczema*, in *acne, lichen, foul ulcers, impetigo, herpes*.

Borax and Glycerine.

15. Borax, ℥j or ℥j; glycerine, ℥ij; rose-water, ℥viiij. Used in *squamous diseases*.

Acid and Lead.

16. Dilute hydrochloric or nitric acid, ℥ss; lead acetate, gr. v to x; glycerine, ℥iss; water, ℥vj. Used in *eczema and lichen*.

Alum.

17. Alum, ℥ij; infusion of roses, ℥xx. Used in *acne, pityriasis, and eczema (sine crustis)*.—(Casenave.)

SEDATIVES.

Soda.

18. Carbonate of soda, ℥ss; conium juice, ℥j; elderflower water, ℥vj. Used in *eczema*, *lichen*, and *urticaria*, to allay itching.

19. Bicarbonate of soda, ℥j; glycerine, ℥iss; elderflower water, ℥viss. Used as above, and in *acne punctata*.

20. Borax, ℥ij; cherry laurel water, ℥j; elderflower water, ℥vij. Used in *lichen*.

Morphia.

21. Borax, ℥ss; sulphate of morphia, gr. vj; rose water, ℥vij. Used in *pruritus vulvæ*.—(Meigs.)

22. Solution of hydrochlorate of morphia, ℥iss; solution of potash, ℥ij; glycerine, ℥j; cherry laurel water, ℥j; elderflower water, ℥xij. Used in *pruriginous eruptions*.

Hydrocyanic Acid.

23. Bichloride of mercury, gr. j; dilute hydrocyanic acid, ℥j; emulsion of almonds, ℥vj. Used in *itching*, *lichen*, and *prurigo*.

24. Dilute hydrocyanic acid, ℥j; solution of acetate of ammonia, ℥ij; tincture of digitalis, ℥iij; rose-water, ℥v. Used in *pruritus*, *prurigo*, *lichen*, and *urticaria*.

25. Dilute hydrocyanic acid, ℥ij; borax, ℥j; rose-water, ℥vij. Used in *pruritus* of old people.—(Neligan.)

Cyanide of Potassium.

26. Cyanide of potassium, gr. vj; cochineal, gr. j; cold cream, ℥j. Used in *pruritus* and *urticaria*.—(Anderson.)

27. Cyanide of potassium, gr. xv; water, ℥vij. Used in pudendal *irritation*, *lichen*, and *prurigo*. It should be kept in a dark place.—(Hardy.)

Chloroform.

28. Carbonate of lead, ℥ss; chloroform, ℥iv; cold cream, ℥j. Used in *pruritus*.

29. Cyanide of potassium, gr. iv; chloroform, ℥viii; glycerine, ℥j; white wax ointment, ℥vj. Used in *pruritus*.—(Neligan.)

30. Chloroform, ℥j; glycerine, ℥iv.—(Duparc.)

31. Bichloride of mercury, gr. iss; chloroform, ℥xx; glycerine, ℥ij; rose-water, ℥vj. Used in *itching*, *papular*, and *vesicular* diseases, and *urticaria*.—(Burgess.)

Belladonna.

32. Extract of belladonna, ℥ss; dilute hydrocyanic acid, ℥ss; glycerine, ℥j; water, ℥xiv. Used in *papular* and *phlegmonous* affections.—(Startin.)

Benzoic Acid.

33. Benzoic acid, 40 to 60 grains to ℥vj of water. Used in *urticaria* to allay itching.—(Ringer.)

Digitalis.

34. Tincture of digitalis, ℥ij to ℥iv; glycerine, ℥ss; rose-water, ℥vj. Used in *pruritus* of a purely neurotic character.

Lead.

35. Carbonate of lead, gr. iv; glycerine, ℥j; simple cerate, ℥j. Used in *erythema*.

36. Glycerine, subacetate of lead, and vaseline. (Made by Squire, 277 Oxford Street, London.) In *intertrigo*, *eczema*. A convenient application is made by rubbing up from half to a drachm of solution of lead, with an ounce of vaseline.

Acetate of Ammonia.

37. Solution of acetate of ammonia, ℥ij; alcohol, ℥ss; rose-water, ℥iv. Used in *lichen*.—(Burgess.)

Carbolic Acid.

38. Liquid carbolic acid, ℥ss; water to Oj. Used to allay itching in *chronic eczema*, or *psoriasis*.

Zinc.

39. Oxide of zinc, ℥ij; solution of lead, ℥j; wine of opium, ℥j; poppy decoction, ℥iv. Used in *eczema*, *herpes*, etc.

40. Oxide of zinc, ℥j; carbonate of lead, ℥j; spermaceti, ℥j; olive oil, q. s. To make a soft ointment. Used in *seborrhœa*, where the skin is inflamed.—(Neumann.)

Camphor.

41. Camphor, ℥ss; alcohol, q. s. ad solve; oxide of zinc and starch, āā ℥j. Used as a powder to allay *burning heat of eczema*.—(Anderson.)

42. Camphor, gr. viij; tincture of conium, ℥ij; simple cerate, ℥j.—(Neligan.)

43. Camphor, ℥ss or ℥j; alcohol, ℥j; borax, ℥ij; rose-water, ℥viij. Used in *pruritus*, *eczema*, and the *erythemata*.

44. Sulphate of atropine, gr. j; borax, ℥ij; glycerine, ℥iij; distilled water to ℥xij. Used to allay *pruritus* in various diseases where skin is not abraded.

Borax.

45. Borax, ℥ij; carbonate of soda, ℥j; glycerine, ℥iss; dilute hydrocyanic acid, m xxx; distilled water, ℥vj. Used in *vesicular* and *sebaceous diseases*.

46. Borax, ℥ij; oxide of zinc, ℥j; solution of subacetate of lead, ℥ij; lime-water, ℥vj to ℥viij. Used in *eczema* and *herpes*.

47. Borax, ℥j to ℥ij; glycerine, ℥j; lard, ℥j. Used in *parasitic* diseases, and in *eczema*, *erythema*, *intertrigo*, and *lichen*.

ABSORBENT POWDERS.

48 (a). Powdered maize, ℥iv; oxide of zinc, ℥j; calamine, ℥ss. Used to *excoriated surfaces*.

48 (b). Powdered maize, ℥iv; oxide of zinc, ℥j; orris powder, ℥ss; essential oil of almonds, gtt. iij.

49. The white Fuller's earth, or Cimolite (prepared by Taylor, Baker Street, London).

STIMULANTS AND ABSORBENTS.

50. Alcohol, oil of cade, soft soap, āā ℥j: oil of lavender, ℥iss. Used in *eczema* and *psoriasis*.—(Anderson.)

51. Soft soap, ℥ij; spirits of wine, ℥j; dissolve, filter, and add spirits of lavender, ℥ij. Used in *seborrhœa*.—(This is the "Kalicreme" of Hebra.)

Iodide of Starch Paste.

52. Powdered starch, 1 part; glycerine, 2 parts; water, 6 parts: boil together, and when nearly cold add solution of iodine, 1 part. Useful to cleanse and heal foul sores, especially such as are *syphilitic*.—(Univ. Coll. Pharm.)

Lead.

53. Lead plaster, ℥ss; almond oil, ℥ss; benzoated oxide of zinc ointment, ℥ij. To be used in *eczema* as an astringent dressing.

Iodoform.

54. Iodoform, gr. xxx-lx; lard, ℥j. Used to dress painful *burns*, *ulcers*, *chancres*, and *boils*.

Mercurial.

55. Calomel, ℥j; lard, ℥j. Used in *herpes*, *psoriasis*, and *pruritus vulvæ*.

56. The oleates of mercury, 5 and 10 per cent. Useful in *ringworm*, *syphilis*, *sycosis*, etc.

57. Green iodide of mercury, gr. ij to gr. xv; lard, ℥j. Used in *acne*.—(Hardy.)

58. Calomel, ℥j; camphor, ℥ss; spirits of wine, q. s.; lard, ℥j. Used in *pruritus* of the anal region, and in *syphilitic ulceration*.

59. Bicyanide of mercury, gr. v to gr. x; lard, ℥j. Used for *syphilitic tubercles*.

60. Red oxide of mercury, finely powdered, and ammoniated mercury, āā gr. vj; lard, ℥j. (The "Unguentum mercuriale comp.") Used in *sebaceous*, *squamous*, *ulcerous*, *tubercular*, and *papular* eruptions.—(Startin.)

61. Iodine, ℥ss; glycerine, ℥ij; olive oil, ℥iijss; strong mercurial ointment, ℥ij. (The Linimentum hydrarg. et iodini of Startin.) Used in *tubercular* and *cachectic* affections.

62. Ammoniated mercury, gr. v; nitrate of mercury ointment, gr. xx; acetate of lead, gr. x; oxide of zinc, gr. xx; purified palm oil, ℥ss; fresh lard, ℥jss. Used in *eczema of the head*, in children especially.

63. Nitrate of mercury ointment, ℥j; solution of subacetate of lead, ℥iss; oxide of zinc, ℥j; carbolic acid, gr. v; fresh lard, ℥j. Used in inflamed or irritable *psoriasis*.

Sulphur.

64. Iodide of sulphur, gr. x to ℥j; lard, ℥j. Used in *acne*.

65. Milk of sulphur, ℥ij; æther, ℥ss; spirits of wine, ℥iij; glycerine ℥iij; rose water ℥vj. To be dabbed on once or twice a day to *indolent acne indurata* or *rosacea*, allowed to remain a moment or two, and then dried off with linen.

66. Hypochloride of sulphur, ℥ij; carbonate of potash, gr. x; lard, ℥j; oil of bitter almonds, gtt. x. Used in *acne*.—(Wilson.)

67. Sulphur, glycerine, rectified spirits of wine, carbonate of potash, sulphuric ether, equal parts by weight. To be rubbed on to the part affected with *comedo*, with friction.

Tar.

68. Tar, alcohol, āā ℥j. Used in *psoriasis* chiefly.

69. Pyroligneous oil of juniper, ℥j to ℥j; mutton suet, ℥ss; lard, ℥j. Used in *eczema* and *psoriasis palmaris*, etc.

70. Tar, ℥j; camphor, gr. x; lard, ℥x. Used in *pruritus* and in *vesicular* and *papular* diseases.—(Baumé.)

71. Detergent solution of tar, ℥ij to ℥j; glycerine, ℥ij; rose water to ℥viij. Used in chronic scaly, itchy conditions (dilute hydrocyanic acid may be added, ℥xxx).

Silver.

72. Silver nitrate, gr. ij to gr. x; water, ℥j. Used in *eczema* and *erythemata*.

Bismuth.

73. Bismuth nitrate, ℥ij; mercury bichloride, gr. x; spirits of camphor, ℥ss; water, q. s. ad ℥xvj. Lotio bismuthi nitratis. Used in *sebaceous*, *pustular*, and *vesicular* diseases, and in *pityriasis*. Use diluted with 1 to 3 parts water.—(Startin.)

Zinc.

74. Oxide of zinc, ℥ij; calamine powder, ℥ss; glycerine, ℥ij; rose water, ℥vj. Used in *eczema*, especially where the surface is red and tender. A grain of the bichloride of mercury may be added.

75. Sulphate of zinc, ℥ss; oxide of zinc, ℥j; alum, ℥j; glycerine, ℥ij; rose water to ℥vj or more. Used in scaly stages of *eczema*, *indolent intertrigo*, etc.

Hebra's Unguentum Diachylon.

76. This is made by boiling together olive oil, ℥xv, and litharge, ℥iij et ℥vj, to a good consistence, and adding oil of lavender, ℥ij. Used in *eczema*, applied twice a day on linen.

77. Subcarbonate of soda, ℥ij; extract of opium, gr. x; slaked lime, ℥j; liquor plumbi, ℥ij. Used for severe itching in *prurigo*.—(Biett.)

78. Nitrate of mercury ointment, ℥ij; camphorated oil, glycerine, āā ℥ss. Used in *psoriasis*.

78 (a). Solution of chlorinated soda, ℥ss; carbonate of potash, gr. xx; orange flower water, ℥x. Used for *freckles*.

PLASTERS.

79. Camphor, ℥ss; black pitch, ℥vj; yellow wax, ℥ix; red oxide of lead, ℥ij; olive oil, ℥iv. To be melted together till a little burned. Used in *boils*. (*Emplastrum fuscum*.)

80. Mercury, ℥v; turpentine, ℥ij; yellow wax, ℥iij; lead plaster, ℥iss. Used in *acne rosacea*.—(*Emplastrum hydrargyri*.—Neumann.)

81. Mercurial plaster, soap plaster, āā ℥j. Used for *syphilitic papules, tubercles, and indurations generally*.

82. Ammoniated mercury, ℥ss; soap plaster, ℥ss. Used in *syphilitic excoriations and ulcerations*. (Sigmund.)

83. Red oxide of mercury, ℥ss; ammoniated mercury, ℥ss; soap plaster, ℥ij. Used in *syphilitic cracks and fissures* about the hand, *indurations*, etc.

MIXTURES.

84. Solution of bichloride of mercury, ℥vj; dilute hydrochloric acid, ℥ss; water, ℥vj. A sixth part to be taken twice a day in *syphilis*.

85. Bichloride of mercury, gr. j; iodide of potassium, ℥ij; water, ℥iij. A dessertspoonful three times a day. Used in *acne*.—(Burgess.)

86. Solution of bichloride of mercury, $\mathfrak{Z}\text{vj}$; iodide of potassium, $\mathfrak{Z}\text{j}$; compound tincture of iodine, mxxv ; water, $\mathfrak{Z}\text{viiij}$. A sixth part may be taken twice a day. Used in *syphilis*.

87. Bichloride of mercury, gr. $\frac{1}{8}$ to $\frac{1}{12}$; arsenious acid, gr. $\frac{1}{60}$ to $\frac{1}{40}$; water, $\mathfrak{Z}\text{ss}$. For each dose, in *chronic syphilis*.

88. Iodide of potassium, $\mathfrak{Z}\text{ss}$ – $\mathfrak{Z}\text{iiij}$; sal volatile, $\mathfrak{Z}\text{iiij}$; syrup of orange-peel, $\mathfrak{Z}\text{iv}$; water to $\mathfrak{Z}\text{viiij}$. A sixth part with half a tumbler of water twice a day. The dose of iodide of potassium may be increased gradually still further, if required. Used in *secondary* and *tertiary syphilis*.

89. Iodide of potassium, $\mathfrak{Z}\text{ss}$ or more; potassio-tartrate of iron, $\mathfrak{Z}\text{j}$; syrup, $\mathfrak{Z}\text{ss}$; water, $\mathfrak{Z}\text{vj}$. One-sixth part for a dose, in *chronic syphilis* in anæmic subjects.

90. Wine of iron, $\mathfrak{Z}\text{jss}$; simple syrup, $\mathfrak{Z}\text{ss}$; Fowler's solution, gtt. xlviij ; distilled water, to $\mathfrak{Z}\text{vj}$. Dose: a tablespoonful twice or thrice a day, in *psoriasis* and other chronic skin diseases.

91. Fowler's solution, mlxxx ; iodide of potassium, gr. xvj ; iodine, gr. iv ; orange-flower water, $\mathfrak{Z}\text{ij}$. Dose: a teaspoonful with water three times a day. Used in *eczema*.—(Neligan.)

92. Cod-liver oil, $\mathfrak{Z}\text{ij}$; yelk of one egg; Fowler's solution, mlxiv ; syrup, $\mathfrak{Z}\text{ij}$; distilled water, q. s. ad $\mathfrak{Z}\text{iv}$. Dose: one teaspoonful three times a day.—(Wilson.)

93. Arseniate of soda, gr. i . to ij ; distilled water, $\mathfrak{Z}\text{viiij}$. Dose: one tablespoonful twice daily.

94. Hydrochloric solution of arsenic, $\mathfrak{Z}\text{ss}$; dilute hydrochloric acid, $\mathfrak{Z}\text{j}$; tincture of the chloride of iron, $\mathfrak{Z}\text{iss}$ to $\mathfrak{Z}\text{iiij}$; water, $\mathfrak{Z}\text{viiij}$. Dose: a sixth part three times a day. In *psoriasis* and *eczema* in anæmic subjects.

95. Sulphate of magnesia, $\mathfrak{Z}\text{ij}$; sulphate of iron, gr. xij ; dilute sulphuric acid, $\mathfrak{Z}\text{ss}$; infusion of quassia, q. s. ad $\mathfrak{Z}\text{viij}$. Dose: one-sixth part twice daily. Used in *acne*, *eczema*,

impetigo, and *ulcerous affections*. Quinine may be added if desired.

96. Sulphate of magnesia, ℥iv; carbonate of magnesia, ℥j; tincture of colchicum, ℥xxxvj; oil of peppermint, ℥ij; water, ℥vij. Dose: a sixth part. Used in *erythematous*, *papular*, and *acute forms of disease* in gouty subjects.

97. Bicarbonate of soda, ℥iij; tincture of calumba, ℥iij; sal volatile, ℥iij; dilute hydrocyanic acid, ℥viiij; syrup of ginger, ℥iij; water, ℥vj. Dose: a sixth part an hour before the two principal meals. Used in skin diseases accompanied by *dyspepsia*.

98. Acetate of potash, ℥j; acetic acid, ℥ss; spirits of nitrous ether, ℥iiss; fluid extract of taraxacum, ℥ij. Dose: a teaspoonful with water before meals. Used in *acne indurata*.—(Bulkley.)

99. Iodide of sodium, ℥j; compound decoction of sarsaparilla, ℥viiij. Dose: a sixth part three times a day in obstinate *syphilitic eruptions*, where iodide of potassium disagrees or fails.

100. Turpentine, rectified, ℥ss to ℥iiss; creasote, ℥iij; spirits of rosemary, ℥xl; water, q. s. ad ℥iv. Dose: two teaspoonfuls every three hours. Used in *purpura*.—(Budd.)

101. Acid tartrate of potash, ℥iij; decoction of broom, ℥vj. Dose: one-sixth part three times day. Used as a diuretic and aperient in *eczema of the legs* with oedema.

102. Acetate of potash, ℥iij; vinegar of squill, ℥iij; sweet spirits of nitre, ℥xx; compound decoction of broom, ℥viiij. Dose: a sixth part thrice daily. Used as a diuretic, where the skin is very hyperæmic and the urine not freely voided. Digitalis may be added if desired.

103. Strychnia, gr. ss-j; dilute phosphoric acid, ℥iij; tincture of orange-peel, ℥ss; infusion of cloves, ℥xj. Dose: half an ounce three times a day. Used in *prurigo* and *lichen*.

PILLS.

104. Red iodide of mercury, gr. j to ij; extract of gentian, ℥ij. Make 12 pills. One pill twice a day.

105. Bicyanide of mercury, gr. j; quinine, gr. xx; extract of gentian, gr. xxx. To make 20 pills. One twice a day. Used in ordinary *syphilitic* eruptions.

106. Arseniate of soda, gr. ij; water sufficient to dissolve it; guaiacum powder, ℥ss; sulphurated mercury, ℥j. Mucilage sufficient to make 24 pills. One pill two or three times a day. Used in *chronic skin diseases*.—(Wilson.)

107. Levigated arsenious acid, gr. v; powdered acacia, ℥ss; cinnamon powder, ℥ij; glycerine, enough to make 100 pills. (Pil. arsenicalis comp.) Dose: one or two a day.

108. Arsenious acid, gr. j; quinine, gr. 20–30; dried sulphate of iron, or reduced iron, gr. xl–℥j; extract of hop, gr. x; extract of gentian, q. s. To be well mixed and divided into 20 or 30 pills. One twice a day after a meal. Used in *chronic skin diseases* with debility.

109. Quinine, gr. j–ij; reduced iron, gr. ij; extract of nux vomica, gr. $\frac{1}{4}$; extract of chamomile, gr. j. To be taken twice or thrice a day.

REMEDIES FOR SCABIES AND PHTHIRIASIS.

110. Sulphuretted potash, ℥vj; hard soap, ℔ij; oil of thyme, ℥ij; olive oil, Oij. Used in *scabies* and *prurigo*.

111. Olive oil, ℥ij; sulphate of potash, ℥xv; sulphate of soda, ℥xv; precipitated sulphur, ℥x. Used in *scabies*.—(Mollard.)

112. Sulphur, tar, āā ℥vj; soft soap, lard, āā ℥xvj; chalk, ℥iv. Used in *scabies*.—(Hebra.)

113. Lard, ℥ij; sulphur, ℥v; carbonate of potash, water, āā ℥ij. Used in *scabies*.—(Hardy.)

114. Sublimed sulphur, ℥ss; ammoniated mercury, gr. v; creasote, gtt. iv; olive oil, ℥ij; fresh lard, ℥j. Used in *scabies*.

115. Olive oil, ℥ss; lard, ℥ss; powdered stavesacre, ℥ij; Soak the stavesacre in hot oil and mix. Used in *phthiriasis*.

116. Quicklime, ℥xvj; flowers of sulphur, ℥xxxij; water, 20 pounds. Boil until 12 pounds remain, and then filter. Used in *scabies*.—(Vlemingk's Solution.)

117. Iodide of potassium ointment is very efficacious in *scabies*.

118. Sulphur ointment, ℥ij; oil of chamomile, gtt. xx. Used in *scabies*.

119. For phthiriasis the ordinary white precipitate ointment of the Pharmacopœia is as good a remedy as any, diluted from 5 to 10 times.

120. Liquid storax, ℥j; lard, ℥ij. Melt and strain. Used in *scabies*.—(Anderson.) A little sulphur may be added if thought desirable.

REMEDIES FOR VEGETABLE PARASITIC DISEASES.

121. Bichloride of mercury, gr. x to xx; elder-flower ointment, ℥j. Used in the early stages of *favus* and *tinea tonsurans*.

122. Carbolic acid, ℥j; glycerine, ℥ss to ℥j. Used in *tinea tonsurans*. Or, the same with rose water, ℥iv, in *tinea circinata*.

123. Hyposulphite of soda, ℥iij; dilute sulphurous acid, ℥ss; water, q. s. ad ℥xvj. Used in all forms of vegetable parasitic disease.—(Startin.)

124. Bichloride of mercury, gr. ij to iv; alcohol, ℥iv; chloride of ammonium, ℥ss; rose water, q. s. ad ℥vj. Used in *scabies*, *phthiriasis*, and *tinea versicolor*.

125. Official solution of sulphurous acid, 1 part; water, 2–4 parts. Used in all the *tineæ*.

126. Pyroligneous oil of juniper, ℥ij to ℥iv; lard, ℥iiss. Used in *tinea*.

127. Hyposulphite of soda, ℥iv; glycerine, ℥j; distilled water, ℥vj. Used in *pruritus vulvæ* and *tinea versicolor*.

128. Ammoniated mercury, gr. vj-xxx: red oxide of mercury, powdered, gr. vj-xxx; lard, ℥j. Used in all forms of ringworm.—(Startin.)

129. Strong ammonia liniment, ℥ss; castor oil, ℥ss; spirits of turpentine, purified, ℥ss; ammoniated mercury, gr. xv. Brush into the scalp with a hard brush until irritation is set up. For *baldness*.

130. Tincture of cantharides, ℥j; distilled vinegar, ℥iss; glycerine, ℥iss; spirits of rosemary, ℥iss; rose water, ℥vij. To be well sponged into the scalp night and morning. For *thinning or loss of hair in the scalp*.

131. Blistering fluid (liniment. cantharides), ℥j; sulphate of zinc, gr. xx; balsam of Peru, ℥iss; powdered galls, ℥ij; lard, ℥j. For *tinea tonsurans*.

132. Subacetate of copper, gr. xxx; birch oil, ℥iij; lard, ℥j. Same.

133. Sulphur, tar, tincture of iodine, lard, āā ℥j. Same.

134. Carbolic acid, ℥j; sublimed sulphur, ℥iij; tincture of iodine, ℥iij; vaseline (unguentum petrolei) or lard, ℥j. In *tinea tonsurans*.

135. Blistering fluid, ℥j; sulphate of copper, ℥ij; powdered galls, ℥j; vaseline, ℥j. For ringworm.

136. Iodine, ℥j-ij; colorless oil of wood tar, ℥j. (This preparation is sometimes known as "Coster's paste.")

137. Tincture of iodine, ℥vj; iodide of iron, gr. xij; terchloride of antimony (liquid P. B.), ℥iv. This solution should be used with care, and should not be used to sore or abraded surfaces; but with this limitation, if painted over a limited area in *ringworm*, say to an inch square at a time, and repeated if need be, it is efficacious. An ointment made of 5 or 6 grains of the crystallized terchloride of antimony to the ounce of lard, with or without ammoniated mercury, and used freely to obstinate places, often acts well.

DIET IN SKIN DISEASES.

There are one or two observations to be made on this subject that may be of use in the management of these diseases.

First.—A distinction must be made between the diet of the private and hospital patient. The latter often only requires to be well fed up and his disease then speedily goes; the former, on the other hand, often needs to have a check put on the quantity and quality of his food, but both need due attention to be paid to their excretory functions, that they be not sluggish.

Secondly.—In young children, skin diseases often arise *directly* from defective alimentation, as in the case of eczema; and it is frequently the case that the child, the subject of eczema, intertrigo, or psoriasis, has not a sufficient supply of *milk*, either from excessive dilution or otherwise; or the child is being nursed by a weakly mother.

Thirdly.—The regulation of the diet, setting aside the question of quantity or quality, is, as a rule, needed not so much to directly influence the skin disease as certain states of the general health, which modify the particular disease present; for instance to meet dyspeptic, gouty, and rheumatic conditions especially, but particularly the former; and the mode in which these act prejudicially upon skin diseases has been referred to in Part I. of this work.

In dyspepsia in connection with eczema, acne, psoriasis, lichen, or congestion of the face, it is advisable, especially if the urine be very acid, to avoid sugar, tea, coffee, alcoholics, beer, raw vegetable matter, unripe or uncooked fruit, veal, pork, seasoned dishes, pastry, cheese, pickles, and the coarser kinds of vegetables, but especially all articles whose use is followed by heat or flushing of the face, and by flatulence, or the like. Milk, the common meats, a light kind of

bread, and some very sound light wine should be the diet of dyspeptic patients, whose skins are at all in a state of irritation. In very many cases the stomach is at fault at the outset, and a careful regulation of the diet is of the utmost importance as an aid to the other means adopted to correct faults in other parts of the system. This implies on the part of the practitioner the possession of an accurate knowledge of the characteristics of the various forms of gastric, intestinal, and hepatic functional diseases, which is indeed most necessary to a successful dealing with a great number of skin troubles.

In the case of gouty subjects the above remarks apply with special force. As regards stimulants, a good light claret, or whiskey in Vals water, are the best beverages.

In strumous subjects, the diet should consist of as much fatty matter as possible.

Fourthly.—In children who suffer from ringworm, it is desirable to give as much fatty matter as possible, by means of milk, cream, eggs, and fat meat if they can eat it.

Fifthly.—In syphilis, the greatest care should be taken to avoid anything beyond the most moderate use of stimulants; their abuse in this disease is a source of the greatest aggravation; otherwise the diet should be *nutritious*.

Sixthly.—In all cases in which the onset or early stage of a skin disease is *accompanied by febrile disturbance*, however slight, or in which the disease is very hyperæmic, stimulants should be avoided, and the plainest and simplest diet ordered. In marked cases of this kind, a milk diet for a while is often found to be very beneficial.

Seventhly.—In some cases in which the skin is very *hyperæmic*, this condition is much increased by the ingestion of food, especially if dyspepsia exists, in consequence of the sympathy existing between the stomach and the part of the skin affected. This state of things is especially marked in such diseases as acne, congestion of the face, and non-para-

sitic sycosis. Stimulants must be avoided, except they be diluted with some alkaline water: the use of a diet appropriate to the dyspepsia must be rigorously enforced.

Eighthly.—It is said that psoriasis requires an ample meat diet; but the patient must be dieted, and not his disease—i. e., the diet should be plain and nutritious, and adapted to the constitutional peculiarities of the individual according to circumstances.

Ninthly.—In all cases where a skin disease has become chronic, and where there is debility, the patient should be allowed a full, unstimulating diet.

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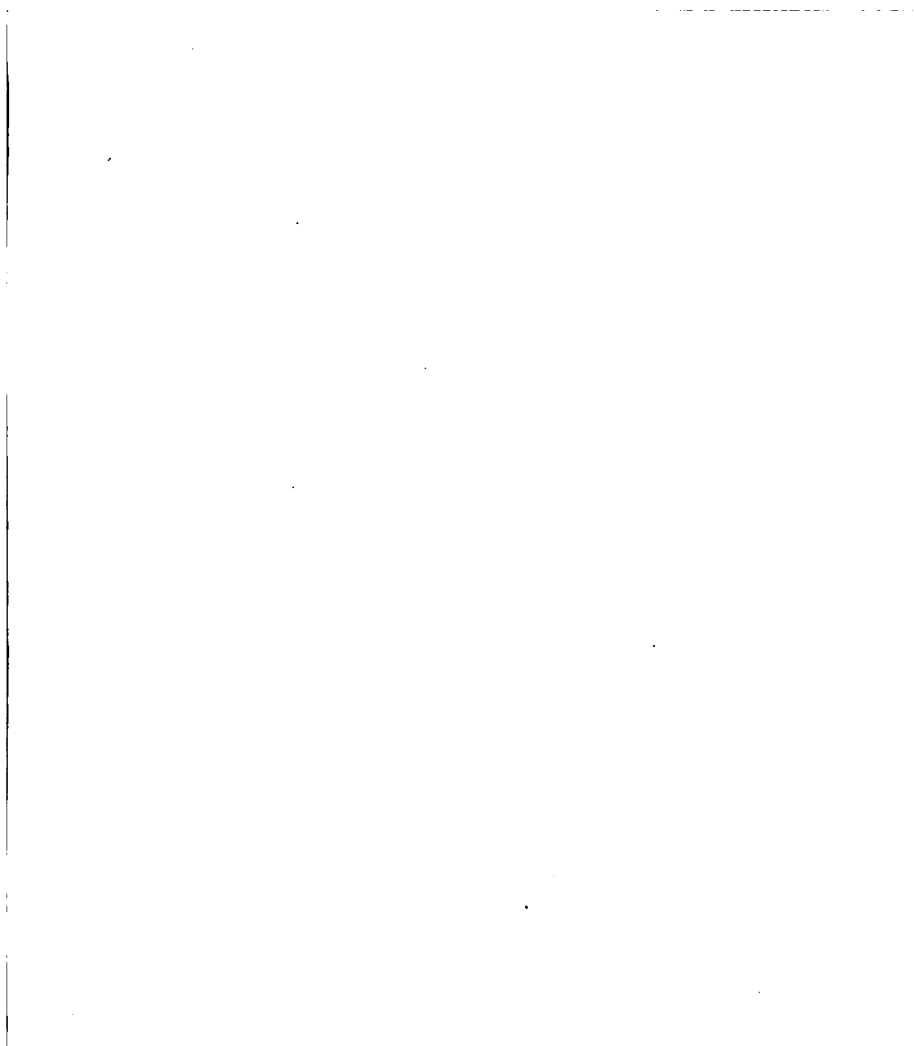
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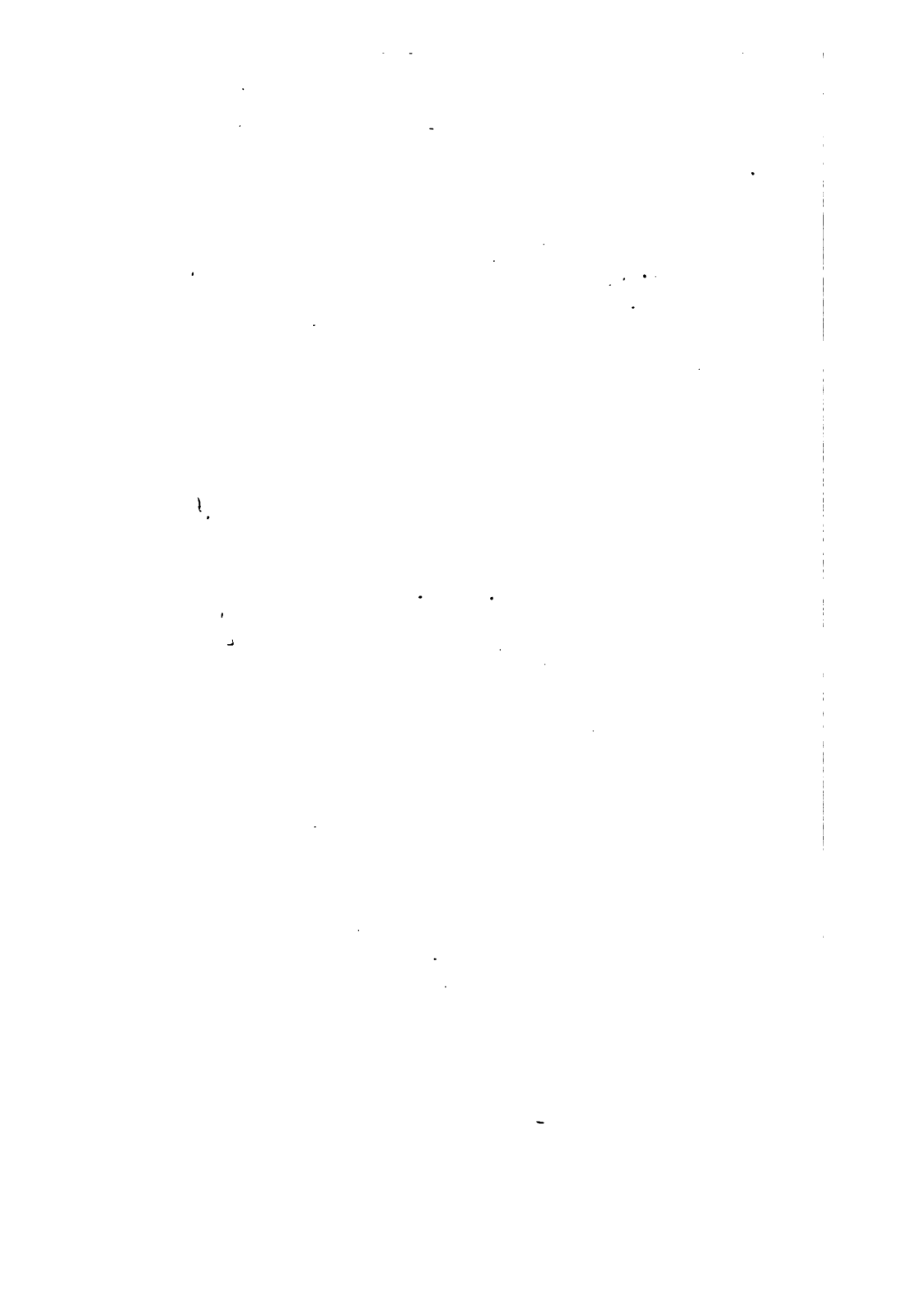
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